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Lady Jones Lecture

ON

NEW CONCEPTIONS IN THE PATHOGENESIS OF SCIATIC PAIN.

Delivered at the University of Liverpool on March 10th, 1927,

BY PROF. V. PUTTI,

ISTITUTO ORTOPEDICO RIZZOLI, BOLOGNA.

IN this lecture I want to unfold a subject which has attracted my attention for many years and which I consider of general interest. What practitioner, indeed, is not interested in the discovery of the causes and cure of a disease, whose predominant symptom is pain?

There is a Latin saying: *Divinum est sedare dolorem.* If pain implies physical suffering, this divine labour is entirely entrusted to the wisdom and humanity of the doctor. Is not our highest, noblest, and most difficult task the endeavour, within our limitations, to soothe, diminish, and occasionally to abolish physical pain? For mental pain, man is his own best physician. One of the great tragic poets, Alfred de Musset, has said: "L'homme est un apprenti, et la douleur est son maitre." But for all that, will-power, moral training, self-control—none of them suffice to banish physical pain. Who but the doctor can hope to attain success, and what practitioner is indifferent to the great warfare against pain?

For the past four years and more I have been studying the subject of the causation of sciatic pain. I have had the opportunity of studying this symptom with vast clinical material, with dissections, and, above all, with a very rich collection of radiographs. While I was in the midst of my investigations, publications by French and American authors appeared which threw much light on the subject, and which suggested to me new points for observation. It has, therefore, seemed to me useful to communicate to you now my results up to date.

Amongst painful diseases, sciatica occupies a foremost place by reason of its prevalence, its production by a great variety of conditions, the great disablement it may produce, and its tendency to relapse: all of which have long ago led to its recognition as one of the great scourges of humanity. It has been known as long as medicine has been studied, but it has only been recognised as a clinical entity since an Italian physician, Domenico Cotunio, gave a complete description of it, towards the middle of the eighteenth century. The ancients named it ischias, and "De Ischiade Nervosa" is the title of the book in which Domenico Cotunio gave its clinical picture. Hence it was long called Cotunio's disease. The name of this great Neapolitan practitioner should not be unfamiliar to you, for it is to him we owe the first accurate description of the fluid contained in the meninges, the cerebro-spinal fluid, or Cotunio's fluid. Cotunio was not only the first to isolate sciatica as a clinical entity, but he also made a distinction between anterior and posterior sciatica, a differentiation which is based on good anatomical grounds and still has considerable clinical value.

Since the time of Cotunio, chiefly through the efforts of neurologists, the symptomatology of sciatica has been increasingly well defined, and to-day we may say that we have the complete clinical picture, and the differential diagnosis is easy. The same cannot be said of the pathology, which remains obscure in many respects. Orthopædic surgeons began to occupy themselves with the subject of sciatica when it was found that in many cases it was associated with deformities, and often took origin from malformations and diseases of the skeleton. Charcot was one of the first to draw attention to the frequent association of sciatica with vertebral deformity, and Brissot first coined the term "sciatic scoliosis," that is to say lateral curvature due to sciatica.

I already denoted sciatica a *symptom*, and such, I think, it should be considered, at any rate from the clinical standpoint. It is only when the pain is due to direct involvement of the nerve by the pathological process that sciatica can be considered a primary disease, and this is rare. In the majority of cases sciatica is only a manifestation of diseases external to the nerve, or at any rate the nerve is only involved as part of a constitutional disease. It is well known that diabetes, syphilis, alcoholism, lead poisoning, and other general toxæmias may cause sciatica by inducing inflammatory and degenerative changes in the nerve. These are true forms of neuritis and can be classed as alcoholic, diabetic, syphilitic, and so on, from the disease primarily responsible. In other cases, the cause is local, and pain is due to compression or irritation of the nerve-trunk at some point or other in its course. Such causes are: tuberculosis, syphilis, vertebral tumours, pelvic and other tumours, as well as fractures. Such secondary sciatica may have an infinite variety of causes, but these have no special interest for us at the moment.

The most common type of sciatica is not of these. It appears and progresses without obvious cause, or, to use the Latin expression, *sine materia*. It is usually called "essential" or "idiopathic sciatica," two rather meaningless words, which were created to indicate our ignorance of the origin and nature of the morbid process. Essential sciatica is sometimes called rheumatic sciatica, because it frequently develops after chills and in individuals of rheumatic or gouty constitution. It thus forms part of the neuro-arthritic syndrome, to which so much attention was formerly paid.

NATURE AND PATHOLOGY OF SCIATIC NEURALGIAS.

But, as a matter of fact, the true nature and mechanism of production of these neuralgias remained in complete obscurity until a few years ago—witness the innumerable therapeutic measures which had been evolved for their treatment. The cause being unknown, attempts were made to treat the results. But it is obvious that symptomatic treatment inevitably yields only unreliable, or incomplete, results, and it may be said that up to the present day there has been no rational, radical cure of idiopathic sciatica.

As the researches of the past few years have thrown much light on the subject, let us consider for a moment our points of departure and of attainment.

As is well known, the nervous system is responsible for the function of sensation. In the absence of nerve-fibres, there is no feeling, and hence no pain. There arise in every organ and every part of the body simple sensory nerves and also sympathetic sensory fibres, which, by various routes and various relations, conduct impressions from the periphery to special receiving centres, and such impressions as reach the cerebral cortex are perceived there as sensations. Any irritation of these sensory fibres in any part of their course induces, through stimulation of the cerebral cortex, the sensation of pain. Thus the cause of the pain may have situations as diverse as the types of irritation.

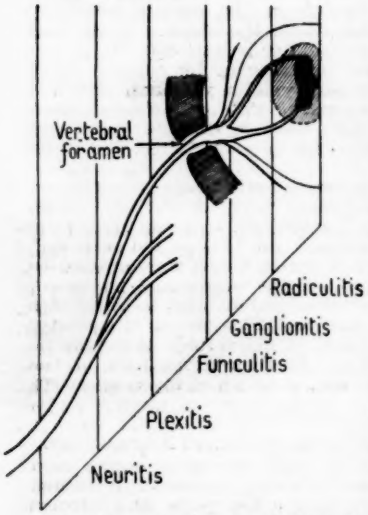
Localisation of Site of Irritation.

As regards diagnosing the level of irritation: if one considers the enormous length of the sensory tracts, one will realise how difficult it may be to localise the cause of pain. The irritation may occur in the peripheral nerve, in the plexus, in the spinal root, in the spinal cord, or in the brain. Pain, as such, has no localising sign. In quality there is no difference between pain originating in the spinal cord and in the peripheral nerve. There are certain gradations in quality, but these are too subtle and

variable to have distinctive value. For example, the pain of sympathetic origin, the so-called causalgia, has a burning, dry character. Root pains tend to be stabbing, crushing, or lightning pains, but as these phenomena are subjective and impossible to measure, we are dependent on the patient's description of them, which introduces an element of uncertainty. Conversely, it is well known that pain of central origin may be referred to the periphery, the classical example being the paræsthesia of amputated limbs. Alternatively, pain of peripheral origin may be referred to the centre.

For all this, there exist certain characters distinctive of certain levels of irritation, from which can be constructed a topographical classification of types of pain. From early times the term neuralgia has been reserved for pain arising in the peripheral nerve, that is the segment of nerve formed by the fusion of various roots in the plexus and extending to the periphery of the limb. Dejerine drew the clinical picture of *Radiculitis*, a form of pain resulting from disease of the nerve roots in the plexus. An even more careful analysis of clinical findings has enabled Sicard and his pupils to differentiate another type which is due to stimuli affecting the segment of nerve between the spinal root and the plexus, as it traverses the intervertebral canal. Sicard has named this part of the nerve trunk the funiculus, the little cord, and has called the pain syndrome, due to irritation at this level, funiculitis. Sicard and his pupil, Forestier, have attempted to give an anatomatical and clinical basis to the funicular syndrome, in contrast to the radicular syndrome of Dejerine (Fig. 1). Following the same lines to a somewhat theoretical conception, Sicard hopes in the future to attain to other topographical differentiations of pain, such as plexitis and ganglionitis—namely, the response to irritation of the limb plexus and of the spinal ganglion.

FIG. 1.



Schematic conception of pathological localisation in the spinal nerves, according to Sicard.

This is not the time to indulge in a critical examination of these new ideas of localisation of pain, but the most important result of these researches is the emergence of a new factor in the causation of neuralgia—that is to say, the vertebral element, or to be more general, the influence of the skeleton. The idea is not new, indeed, that a nerve may be irritated in the canal or foramen which it traverses. Long ago it was recognised that many types of trigeminal neuralgia, facial, suprascapular and Arnold's occipital nerve neuralgia, as well as ulnar and radial, are the result of mechanical irritation of the nerve trunk by the bony foramina, or osteoperiosteal canals. Sicard has re-named these conditions also; he calls them "nevrodocitis" derived from two Greek words: Neuron=nerve; and the verb Dekon=to contain. Nevrodocitis, therefore, indicates nerve pain due to stimulation of the nerve by the bony foramen or canal which contains it. We shall frequently make use of this term, which is descriptive and comprehensive.

VERTEBRAL AND PELVIC FACTORS IN SCIATICA.

As regards the pathology of sciatica, the importance of vertebral and pelvic factors was pointed out some years ago by an American orthopaedic surgeon, Goldthwait, of Boston. Goldthwait was the first to investigate the problem from its anatomical and mechanical aspects, and his work gave inspiration to a series of researches, which have thrown great light upon the matter. He was also the first to draw attention to the frequency of certain congenital anomalies of the spinal column, such as sacralisation of the fifth lumbar vertebra, and variations in the posterior articulations, while he pointed to the possible connexion between these abnormalities and sciatic pain. Goldthwait's views, after they had been defined and extended by other workers, became so popular that in a short time the subject of sacralisation of the fifth lumbar, and its association with sciatica, took a prominent place in medical literature. This was natural enough, for the desire to find an anatomic basis for sciatica and the actual frequency of morphological variations of the fifth lumbar vertebra naturally led to acceptance of Goldthwait's ideas and the recognition of the syndrome, which French authors have recently designated painful sacralisation of the fifth lumbar vertebra. The fifth lumbar vertebra is the foundation-stone of the vertebral column, and it is also much subject to congenital variations, because it is intermediate in position between two segments, the lumbar and the sacral, and has no fixed character. Thus, it is not uncommonly seen to resemble a sacral more than a lumbar vertebra. Its transverse processes may be so wide and deep that they exactly resemble the alae of the sacrum, and in extreme cases it is impossible to distinguish the fifth lumbar from the first sacral. The anomaly may be symmetrical or unilateral.

What connexion is there between the presence of these abnormalities and the development of sciatica? The connexion can easily be divined. In the intervertebral foramen, between the fifth lumbar and the first sacral, runs the fifth root of the lumbo-sacral plexus, a root which is the principal constituent of the sciatic nerve. If the transverse process of the fifth lumbar is wider and deeper, as in these cases of so-called sacralisation, then the lumen of the canal is narrowed and lengthened, and the fifth root may be irritated or compressed as it runs through the canal. Anatomical and radiological studies have demonstrated that sacralisation of the fifth lumbar occurs far more frequently than was formerly recognised. This discovery suggested for a time that the true cause of sciatica had been finally discovered. Some surgeons were induced by this discovery to treat sciatica by removal of the fifth lumbar transverse processes. They expected that, as soon as the process was removed and the canal thereby enlarged, the nerve would have a free course and the pain be cured. But unfortunately results have not always corresponded to their expectations, and criticism has now overturned the elaborate and somewhat theoretical edifice, erected on the base of lumbar sacralisation. It cannot be denied that sacralisation may sometimes be the cause of sciatica, but, on the other hand, the anomaly is frequently found to be present without any associated symptoms, referable to the lumbo-sacral plexus. It must also be borne in mind that the fourth lumbar contributes to the formation of the plexus, and it is often possible to demonstrate that the pain is due to involvement of this root and not of the fifth, which alone could be affected by sacralisation. Finally, if we consider the close relation existing between the development of the vertebral column and of the spinal cord in the embryo, we should expect that with reduction of the intervertebral foramen would be associated a smaller nerve-root, so eliminating the probability of compression. For the above reasons, and others, opinion now is in favour of considering lumbar sacralisation

as one, but by no means the most frequent or severe, of the causes of sciatica.

In view of the intimate relation of the roots of the sciatic nerve to the sacro-iliac synchondrosis, it has been stated that peculiarities and diseases of this joint may cause sciatica. This hypothesis lacks anatomical or clinical support; indeed, the recent investigations of Danforth and Wilson seem to exclude it.

ANATOMY OF LUMBAR SPINE IN RELATION TO SCIATICA.

For all this, we must not lose sight of the fact that the study of cases of sciatica shows one constant factor—namely, the association of the pain with anatomical alterations, or functional disturbance of the lumbar spine.

We referred previously to the name rheumatic sciatica, and it is common to find it occurring in individuals with various other rheumatic manifestations, more especially spinal rheumatism. It is common, in taking the history of a case of sciatica, to learn that the attack was preceded by repeated bouts of lumbago—that is, of pain in the lumbar region, which is now recognised as one of the manifestations of rheumatism. Occasionally sciatica comes on suddenly and violently after a quick stooping movement, such as the lifting of a load from the ground. The patient, as he bends, or rises, feels sudden sharp pain in the lumbar spine, which shoots down the course of the sciatic nerve and causes immediate rigidity of the back. This is the usual mechanism of the so-called traumatic lumbago, which results from torsion of the lumbar

FIG. 2.

Anomaly of tropism of the inferior articular facets of a lumbar vertebra.

articulations, and almost always causes sciatica. Cases of Pott's disease, involving the lumbar vertebræ, are often tormented with violent sciatic pain. In them the sciatica is secondary, but its existence demonstrates the close connexion between a vertebral lesion and sciatica.

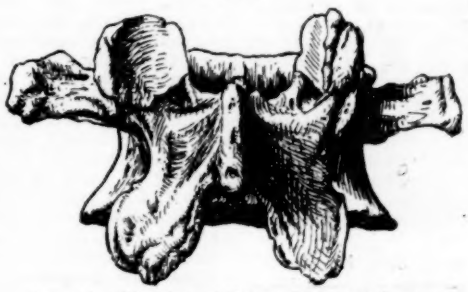
Many neuralgias of the trunk, upper limb, even of the head and face, take origin in some skeletal peculiarity, in fact, are the result of compression, or strain on nerves, or nerve roots, where they traverse bony canals. These are the ones comprised by Sicard under the name "nevrodocitis."

The peripheral nervous system is composed of bundles of nerve-fibres, which in escaping from the spinal canal must traverse a series of bony foramina at the sides of the vertebral column, the so-called intervertebral foramina. Hence the peripheral nerves are liable to be affected by the condition of the vertebral column, and more especially by the intervertebral foramina. In view of the important part these canals play in the pathology of neuralgia, it was desirable to study carefully their anatomical features and their relationship to the nerve roots. Anatomists and clinicians have shared the labour, and thanks to their investigations new light has been thrown on the pathogenesis of peripheral neuralgia.

What is the result of their studies? For the sake of clearness, we will first deal with the results of anatomical research, and later with clinical features. We shall restrict ourselves exclusively to the points which bear on the pathology of sciatica.

In general, the anatomy of the lumbar spine is familiar, but it seems worth while to emphasise

FIG. 3.



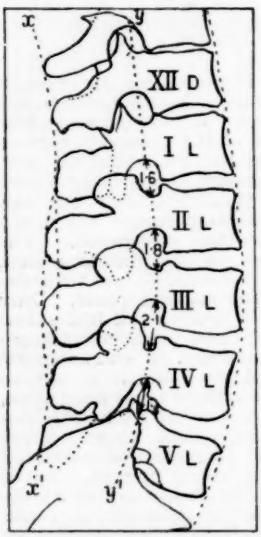
Anomaly of tropism of the superior articular facets of a lumbar vertebra.

the composition of the intervertebral canals through which the nerve roots emerge. In brief, the canal is formed as follows: Above is the intervertebral notch. In front is a little of the posterior part of the body above, a little of the intervertebral disc, and a little of the posterior part of the body below. Behind is the posterior articulation, and this last is a feature of considerable importance when the relations of the nerve roots are considered. The typical posterior articulation of the lumbar region, as it is depicted in anatomy books, is one with the articular facets placed in the sagittal plane. Only in the joint between the fifth lumbar and first sacral are the facets placed in the frontal plane, an arrangement which, as noted previously, is characteristic of the thoracic region. All the same it is safe to say that for the lumbar facets there is no fixed type. An investigation which I made on numerous dissections showed me that individual variations are very common indeed. This observation is confirmed by the study of many hundreds of X rays. But if variations in the angles of the facets are relatively unimportant when the angle does not diverge much from that considered normal, yet they become of great significance when they are of a severe degree of abnormality, and when they are unilateral only, a character by no means uncommon. I called attention to these peculiarities more than fifteen years ago in an article devoted to congenital deformities of the spine. I re-examined this material in my study of the pathology of sciatica and found it not uncommon to have one articulation in the sagittal plane, while its fellow was placed in the frontal plane. This arrangement may be met with in any of the lumbar vertebræ, but is most frequent in the articulations of the fifth lumbar with the first sacral. (Figs. 2 and 3.) We already noted that these joints are normally placed in the frontal plane, but it may happen that while one remains so, the other is exactly sagittal.

These anomalies may have a two-fold effect on the intervertebral foramen; firstly, they may alter its shape and reduce its capacity; secondarily, by altering the mechanics of the spinal column, they may induce a localised arthritis, which itself may irritate the nerve trunk. This effect may also be produced by all the inflammatory processes that have their seat in the vertebral articulations, and we know how frequently this occurs. The diseased joint, by its swelling and deformity, changes the shape and capacity of the foramen, thus irritating and compressing the nerve within it. Hence the neuralgia, or nevrodocitis.

Recent researches have shown that the intervertebral foramina are not all of the same size. The foramen between the fifth lumbar vertebra and the sacrum is always the smallest, that between the fourth and fifth vertebræ the next larger, and that between the fourth and third usually the next, although sometimes the second and third were about equal. Quite contrary to the size of the foramen or canal is the size of the nerve root enclosed. The fifth is always largest, the fourth next to the largest, and the third smaller as a rule, although sometimes the second and third roots were about equal in size. (Fig. 4.) In other words, the fourth and fifth lumbar roots are predisposed, on anatomical grounds, to be affected more than any others by changes in the canals through which they pass. This fact has an important bearing on the pathology of sciatica, seeing that the fourth and fifth lumbar roots constitute a large part of the sciatic nerve. When, furthermore, it is considered that the fourth and fifth lumbar vertebræ, owing to their position in the spine, are the most exposed of all the vertebræ to compression and strain, and hence are the favourite site of arthritic processes, one can easily understand the frequency of sciatic pain.

FIG. 4.



The difference in size of the various intervertebral foramina (from Bonniot).

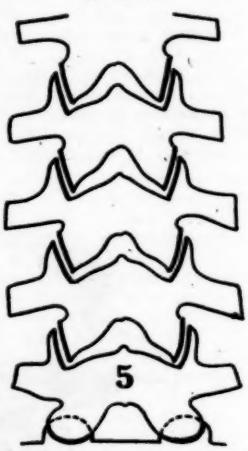
So much for the vertebral canal; but we must also consider its content, the funiculus. The most recent researches on this subject are those of Bonniot and Forestier. The conclusions of these two writers may be summarised as follows: The fourth and fifth lumbar nerves are those possessing the longest funicular portion of all those which constitute the lumbo-sacral plexus—namely, those with the longest course through intervertebral foramina. The funicular portion of the nerve, unlike the intraspinal portion, does not lie within the arachnoid, but is only clothed by dura mater, and is not bathed in cerebro-spinal fluid. Around the funiculus there is a very rich venous plexus, which is much influenced by mechanical conditions outside the funiculus. The absence of arachnoid, and therefore of a protective layer of fluid, exposes the funiculus to outside mechanical influences, such as do not affect the root, while the surrounding venous plexus puts it at the mercy of any congestion and stasis that may occur in the neighbourhood from many causes.

The intervertebral foramen for all these reasons constitutes a critical region, or as Sicard has happily named it, "carrefour de la douleur"—i.e., the cross-roads of neuralgia. Any condition which modifies in the slightest degree the contents, or the container, at once induces a painful reaction, which is referred distally to the sciatic nerve.

Such conditions are discovered by X rays, or by clinical examination. The importance of X ray examination goes without saying, but it is necessary to be clear as to the interpretation to be placed on the X ray evidence. Up till now, many have paid more attention to alterations in the bodies and transverse processes than to modifications of the form and structure of the intervertebral canals. We have already referred to the fate of the so-called syndrome of painful sacralisation. The undue value given for a time to that syndrome distracted attention from phenomena of greater importance. It is undeniable that in certain cases the sciatica is caused by the sacralisation of the fifth lumbar, but the two phenomena are less frequently associated than has been asserted. The same may be said of all the forms of arthritis which affect chiefly the bodies of the vertebræ, and which are evidenced in X rays by bridges of bone uniting, more or less completely, the bodies themselves. This X ray picture corresponds to the well-known group of ankylosing disease, which pass under the name of arthritis deformans, ankylosing spondylitis, Bechterew's and Pierre Marie's diseases. Even in these it is possible that the morbid process, although mainly localised in the body of the vertebra, may influence the intervertebral canal, and thus indirectly irritate the nerve trunk, but it is certain that in the causation of sciatica the changes in the vertebral body are of minor importance compared to those in the articulations.

The abnormalities, deformities, and inflammations of these joints, and the alterations in form of the intervertebral foramen, have not been appreciated at their due value hitherto, because they are not easily recognised on a skiagram. But if one has available first-rate X rays, and above all, if one makes extensive use of stereoscopic X rays, no trained eye will fail to determine the form, size, relations, and structure of the foramina and also the articulations. I lay stress on this point, because nowadays in dealing with a case of sciatica everything depends on the estimation of the condition of the spinal column. No progress would have been made in the elucidation of this obscure problem, if X rays had not convinced us that idiopathic, or essential, sciatica is synonymous with spinal arthritis. If X rays had not shown the existence and frequency of arthritis, clinical examination alone would not have given us the clue to the just interpretation of the facts.

FIG. 5.



Radiographic picture of the articular system in the lumbar column under normal conditions. The articular facets of the first four vertebræ are placed on a sagittal plane, while those between the fifth lumbar and first sacral are in a frontal plane.

But, as I have said, to reveal the anatomical signs of vertebral arthritis, perfect radiograms and experienced examiners are indispensable. In many cases the alterations of the intervertebral articulations are not visible because the radiograms are imperfect, and often also vertebral arthritis is denied because its clinical manifestations have not been appreciated. The intervertebral articulations and foramina are two elements that are generally overlooked in the radiological examination of the spine, the attention of the examiner being commonly attracted to the condition of the bodies, the most conspicuous parts of the vertebræ. Almost always lateral views are neglected and stereoscopic radiograms are little used. It is not possible to judge rightly the conditions and proportions of the canals if lateral radiograms are not taken. And it is impossible to obtain a proper impression of the relations of the articular facets without a stereogram. However, the task is facilitated by the fact that it is the lumbar spine which is affected, the segment that lends itself best to a complete radiological study.

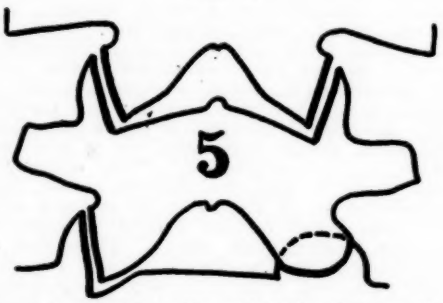
It would be very instructive to demonstrate the anomalies, deformities, and various forms of arthritis, which alter the intervertebral articulations and foramina, but to do so I should need the original

skiagrams, more particularly the stereoscopic ones, for the finer details are lost in lantern-slides.

ALTERATIONS IN INTERVERTEBRAL ARTICULATIONS AND FORAMINA.

I shall limit myself, however, to demonstrating those phenomena which can be found with greater

FIG. 6.

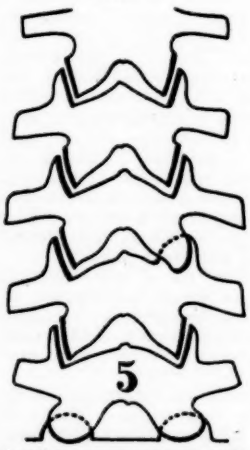


A frequent anomaly in the articulation between the fifth lumbar and first sacral; one articulation is in the frontal plane while the other is in the sagittal. (Anomaly of the articular tropism.)

frequency and ease on radiographic examination, and especially those that have the greatest clinical importance.

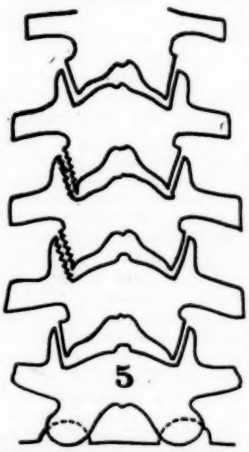
Fig. 5 demonstrates in a diagrammatic way what may be considered the normal radiographic aspect of the articular processes that unite the first four vertebræ, which, as it has been said, have their articular spaces in a sagittal plane. They appear upon the diagram as clear lines with definite borders and in almost perpendicular direction. This line does not appear in the articulation between the fifth lumbar and the sacrum, because it is not normally

FIG. 7.



Another example of anomaly of the articular tropism; the articulation on the right, between the third and fourth lumbar vertebræ, is on a frontal plane.

FIG. 8.



Schematic representation of the radiographic signs in lumbar arthritis (between second and third, third and fourth lumbar vertebræ), left side.

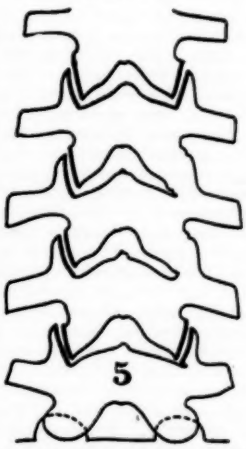
directed on a frontal plane. If the conditions which I have stated above are kept in mind it will not be difficult to discover anomalies or anatomical alterations of the lumbar articulations.

Fig. 6 illustrates an anomaly that frequently appears in the relationship between the fifth lumbar and the sacrum. One articulation preserves the normal position, while the other assumes the radiographic characteristics that belong to the first four lumbar vertebræ. The same anomaly may occur in the articular relations between the other vertebræ. (Fig. 7.) To this condition I have given the name of "anomaly of the articular tropism."

But that which interests us mostly is the proof of the phenomena which follow inflammatory processes of the articulations. They are in reality the same which radiograms demonstrate in every arthritis even though not vertebral. The articular surfaces instead of appearing smooth and parallel appear jagged and rough, as diagrammatically shown in Fig. 8. With perfect radiograms it is possible to determine the structural condition of the articular tissues. It is not infrequent to find a localised ankylosis in one or another of the articulations. This is represented on the radiogram by absence of one or more articular spaces. (See Fig. 9.) The radiographic aspect of a total ankylosis is very characteristic, as the joint space has completely disappeared. (Fig. 10.)

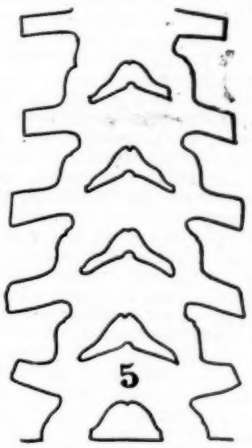
Nowadays the cause of sciatica is to be diagnosed more by a study of the X rays than of the clinical

FIG. 9.



Partial ankylosis. Unilateral (between second and third, third and fourth lumbar vertebræ).

FIG. 10.



Total ankylosis.

symptoms. This does not mean that one is to neglect investigation of the symptoms. Diagnosis, the constant preoccupation of the medical mind, is a conclusion drawn from a study of the facts which knowledge and experience enable us to perceive. The more numerous and objective the facts, the easier and safer the conclusion. But this judgment is born less of the bald assemblage of facts and scholastic classification of them, than of a reasoned analysis of their relation to one another, their logical interdependence. Longfellow has well said:—

> None but a clever dialectician
> Can hope to become a great physician.
> Logic makes an important part
> Of the mystery of the healing art,
> For without it how could you hope to show
> That nobody knows so much as you know?

CLINICAL MANIFESTATIONS OF SCIATICA.

Let us not, therefore, neglect the clinical manifestations of sciatica. Amongst the symptoms is a constant one that may well be called spinal. I mean the *rigidity of the lumbar spine*. Next to pain, this is the dominating feature of idiopathic sciatica. It is well known that there is no clear-cut clinical picture in this disease. Lasègue's sign—namely, the pain caused by expension of the knee with simultaneous flexion of the hip, is neither constant nor characteristic of idiopathic sciatica. Absence of the knee- and ankle-jerks, muscle atrophy, sensory changes, are all phenomena of value in certain cases, but cannot be called pathognomonic.

Even lumbar spasm cannot be correctly called a special symptom, for it exists in every case of irritation of the lumbar spine; nevertheless, it acquires great diagnostic value when it is associated with sciatic pain. It is absent in root sciatica and in all the secondary forms of sciatica. On the contrary, it is always present, or nearly always, in the rheumatic, arthritic type. We have repeated that this type is due to joint disease. Every joint responds to irritation by contractures of the muscles which control its movements. This contracture represents a *defensive reflex*—that is, a reflex designed to protect the joint from pain. The contracture produces this defence by immobilising the joint. The joint is thus fixed in an attitude which may be called protective, an attitude which relieves it of pain. As we said, this attitude has nothing characteristic of vertebral joints or of sciatica. It is found in every painful joint, and each joint has its own special protective attitude. The vertebral column is nothing but a congeries of joints, and as such it protects itself from pain by assuming characteristic attitudes. Scoliosis is the protective contracture of the vertebral articulations.

In the early stages, when sciatic pain is not severe, the spinal column remains straight in the frontal plane, but complete forward flexion is impossible without aggravation of the pain. In other words, the lumbar spine is rigid, but not deformed. This rigidity may persist throughout the course of the disease and disappear when the pain ceases. But usually, soon after the onset of pain, and while the pain is increasing, the spine curves laterally, displacing the trunk to the side away from the pain. This is the so-called *contralateral sciatic scoliosis*, so-named by Brissaud, who was one of the first to study the subject. It can happen, though less frequently, that the contracture bends the spine in the reverse direction, thus displacing the trunk towards the painful side. This is the so-called *homolateral scoliosis*. Remak, in 1890, described a type of alternating sciatic scoliosis—that is to say, a lateral curvature, which is alternately contra- and nomo-lateral. Of these three different types the contralateral scoliosis is by far the most common, and is the one which may appear suddenly in the acute forms of rheumatic sciatica. Homolateral scoliosis is found less frequently, and then usually in the less severe types of sciatica, and those which have a gradual onset. The alternating type is the rarest of the three. It begins as contralateral scoliosis and, in time, develops into the alternating form.

But why should these vertebral contractures and deformities be so diverse. Why in apparently identical cases, identical alike in duration and severity, should one show a contralateral scoliosis, another homolateral, and a third alternating? This is a clinical problem that appeared very difficult to solve. Its investigation is important, not only on theoretical, but also, and more particularly on practical grounds, because these deformities may be extremely severe in type, long in duration, and even persistent after the pain has disappeared. Hypotheses have been brought forward by men of authority such as Charcot, Gussenbauer, Hoffa, and Lorenz. But the explanations have seldom seemed convincing. To-day, thanks to the studies to which we have already referred, a new light has been thrown on the subject.

One thing is beyond dispute: that scoliosis, of whatever type, is due to *muscular contracture*, which is itself a reflex, induced by the pain with the object of diminishing the pain. Ask the patient and examine him, and you will soon be convinced of this fact. Try to correct and overcome the scoliosis, and you will find the patient protest, because the pain immediately becomes unbearable. If you ask the patient, he will tell you that the curvature came on spontaneously, and that he does not try to correct it, because that increases his pain. Thus the contracture and scoliosis have as their purpose the diminution of pain. How is this achieved? By what mechanism can these various contractures reduce pain? The commonly accepted explanation is that the attitude of the trunk, together with abduction and flexion of the affected limb, produces a relaxation of the sciatic nerve, and thus relieves the pain. But this hypothesis does not explain all the facts. Were this true, the scoliosis should be always of the same type, and all forms of sciatica should produce it, whereas we know it is characteristic of rheumatic sciatica. On the other hand, the mechanism becomes much more obvious, if we accept the arthritic origin of sciatica.

As was said, every arthritis produces contractures. Scoliosis is merely the contracture special to the spinal articulations. Joint contractures are not constant, but vary in type, depending on a number of factors. A classical example is the contracture of the hip-joint, which may take up a position of adduction, or of abduction. The contralateral scoliosis, which we said was the commonest, results in the separation of the articular surfaces of the intervertebral joints on the painful side and also widens the intervertebral canals. Thus, the contracture immobilises the joints, reduces friction of their surfaces, and diminishes any compression of the nerve-trunks.

Homolateral scoliosis relaxes the joints and makes the nerve cords relax on the painful side. In all the cases of alternating scoliosis that we have been able to examine by X rays, we have found a bilateral arthritis of the joints between the fifth lumbar and the sacrum. We therefore think that the scoliosis is alternating because the arthritis is bilateral. The change of attitude is the result of the need felt by the patient to rest the joints first of one side and then the other. In short, this is the explanation we give of that most important symptom of idiopathic sciatica, the scoliosis. Thus considered, the scoliosis no longer represents an isolated phenomenon, but a manifestation logically to be expected, with numerous analogies and an anatomic basis. Indeed, the vertebral arthritis, the essential cause of the scoliosis, is no abstract conception but a fact demonstrated by X rays. This conception of the mechanism of sciatic scoliosis agrees, moreover, with the modern conception of the pathogenesis of sciatic pain. In fact, the occurrence of sciatic scoliosis proves once again that the most important factor in the causation of neurodocitis is a localised arthritis of the joints between the fourth and fifth lumbar vertebræ.

Based on this conception is a classification, proposed by Sicard, of sciatica into *upper*, *middle*, and *lower*, according as the seat of pain lies in the spine, in the pelvis, in the popliteal space, or in the leg. I personally prefer a more definite and comprehensive division into *central* and *peripheral* sciatica. The first includes root and vertebral sciaticas, the second includes pelvic, femoral, and popliteal ones.

Sicard has drawn attention to a phenomenon which, according to him, has great importance in the differential diagnosis of *radicular* from *vertebral* sciatica. We must refer to this phenomenon, although we feel some doubt as to its constancy and intrinsic diagnostic value.

Sicard's phenomenon depends on examination of the cerebro-spinal fluid. In *root sciatica* there is said to be a lymphocytosis; in *funiculitis* an increase in the albumin content, without lymphocytosis, a state of the fluid which Sicard and Foix have called cell-albumin dissociation.

The increase of albumin, which is supposed to be peculiar to funiculitis, is due, according to Sicard, to the obstruction to the venous circulation by inflammation and compression in the canal. The control experiments which we have carried out on numerous patients have not led us to any definite conclusion in the matter. Beyond the symptoms to which we have referred, idiopathic sciatica shows others of an eminently neurological character. But their diagnostic importance is relative. Naturally an inflammatory reaction in a mixed nerve like the sciatic induces, besides pain, symptoms of trophic,

sensory, motor, reflex, and sympathetic nature. Often there is general reduction of the muscles of the whole limb, more particularly of the thigh and leg. In some severe cases one finds paresis or paralysis of the external popliteal, but tests have never shown the electrical reactions of degeneration. More important is the condition of the reflexes. The ankle-jerk is the one most often affected. Frequently it is abolished, nor is it rare to find it diminished. We have seen cases in which, many years after the disappearance of every symptom of sciatica, the ankle-jerk was still absent. The knee-jerk also varies, and its disappearance is by no means rare.

THE SCIENTIFIC TREATMENT OF SCIATICA.

This seems to me the moment to answer a question which I imagine some of you are longing to put to me: What influence have these new conceptions of the pathology of sciatica on the treatment of the pain itself? If a treatment initiated on pathological grounds produces the desired effect, that fact of itself constitutes the most certain proof that the cause of the disease has been correctly ascertained. The results which I have obtained in a large number of cases of idiopathic sciatica by applying treatment based on the conviction that it is the consequence of spinal arthritis, demonstrate, in my opinion, that my conviction is correct.

It is unnecessary to enumerate the therapeutic measures which have been applied in sciatica. These measures were almost exclusively symptomatic. The cause being unknown, an attempt was made to treat the results, and efforts were made to overcome the pain with all measures, chemical, physical, mechanical, and surgical, at the disposal of the profession.

Once convinced that idiopathic sciatica takes origin in spinal arthritis, we followed out in its treatment the two fundamental principles of treatment for any non-specific arthritis—namely, *active hyperæmia* and *immobilisation*. Active hyperæmia, obtained by the action of heat on the part, causes vasodilatation in the neighbourhood of the joint and hence an active interchange of fluids, which by self-immunisation has a curative effect on the arthritis. Immobilisation rests the joints and relieves it from mechanical irritation.

The technique of this treatment is briefly as follows:—

In the acute stage the patient is rigorously confined to bed. When the diagnosis has been confirmed, active hyperæmia is begun, which consists in a daily hot-air bath. The bath is given by one of the numerous forms of apparatus that have been designed for this purpose. We greatly prefer Bier's apparatus, which consists of a wooden box, adapted to contain the part of the body which it is desired to expose to the action of heat. Into this box is driven a current of hot air produced by a spirit lamp. With Bier's apparatus it is easy to attain the maximum temperature which the body will stand. If the general condition of the patient allows, the bath will be given daily for 30 to 40 minutes. In the first few days the temperature will rise to about 90° C., later to a maximum of 120° to 125°. The hot bath will be followed by general massage. In the great majority of cases one finds, after the first few baths, an aggravation of the pain, quickly followed by decisive improvement.

The moment the patient is fit to stand for a time without pain the second stage of treatment is initiated—namely, immobilisation. This is obtained by means of a plaster jacket. I cannot stop to describe the technique of the making of this jacket. A few general rules must suffice:—

1. The jacket must give fixation to the pelvis and trunk, except the shoulders.

2. It must only immobilise, not attempt to correct. Even if severe scoliosis is present it must not be interfered with.

3. The jacket must never be left on any longer than is necessary for the setting of the plaster, which is about 30 minutes.

Allow me to lay stress on the point that the jacket must immobilise and not attempt to correct. Its only purpose is to rest the inflamed joints. We said before that the spinal contracture represents the patient's own method of reducing pain. To correct the contracture is to exacerbate the pain. The contracture must disappear spontaneously as the result of immobilisation. Experience has shown that leaving the corset on causes within 24 hours a very severe spasm of pain. The sciatica case cannot endure any compulsory position for more than a few moments. Pain compels him to change the position of his spine every few minutes. For this reason the corset must be removed as soon as it is finished. It is to be worn daily for increasing periods, until the patient is used to it. This will be within a few days. Usually by the end of a week the patient is able to tolerate the corset continuously. Meanwhile the hyperæmia treatment is continued. This treatment is usually completed in 18 to 20 baths. On the contrary, it is impossible to fix the end of the immobilisation period. Usually, after two or three months, the plaster jacket can be replaced by a celluloid corset. In mild cases of spinal sciatica immobilisation will be continued for not less than six months; in more serious cases the jacket may need to be worn for more than a year.

This is not the time to dwell at length on statistics of the results of this treatment. Long experience has shown me that it rests on a good foundation, because the results are good in the majority of cases. There are, indeed, very severe cases which do not improve with conservative treatment. Some years ago Sicard advised resort in these cases to surgical measures—that is, laminectomy. According to Sicard, laminectomy—namely, removal of the laminæ of the fifth, fourth, and sometimes the third lumbar vertebræ—would result in decompression of the funiculi. In some cases operated on by Robineau, Sicard observed that the dura mater was irregular with scar tissue, which he thought might have some bearing on the causation of sciatica. Sicard regards the results of laminectomy as most favourable.

I have only encountered a single case of arthritic sciatica which resisted all conservative treatment, and in which I felt compelled to resort to surgery. The case was that of a man of 52, who for more than 30 years suffered from periodic attacks of sciatica, and who for some months has been unable to assume the upright position. There was severe lumbar contracture, which had produced a rigid, contralateral scoliosis. The X ray showed advanced pathological changes in the bodies and articulations of the fourth and fifth lumbar vertebræ. In this case I did not limit myself to carrying out a laminectomy, because it seemed to me an operation insufficient to relieve compression of the funiculi. The vertebral laminæ take no part in the formation of the intervertebral foramina. In order to decompress the funiculi it is necessary to open the bony canal, which can only be done by resecting the posterior articulations, which is what I did in my case. After removing the laminæ of the fifth, fourth, and third lumbar vertebræ, I resected the posterior articulations which unite the fourth to the fifth lumbar, and it to the sacrum. Thus I succeeded in completely exposing the fourth and fifth lumbar nerves on both sides. I did not see any macroscopic changes in the meninges, in the roots, or in the funiculi. Complete success resulted. In a few days the patient was free from all pain; at the end of a month he could get up and walk without difficulty in a plaster jacket. The improvement is maintained more than three years after the operation. This result shows that even for the most severe cases of sciatica there exists a cure, and it also demonstrates once again that the explanation of the pathology of sciatica which has been put forward in this lecture is a rational one.

CONCLUSIONS.

Sciatic pain is symptomatic of vertebral arthritis excepting in those rare cases in which it is a symptom of a neuritis of specific nature. Sciatica is a neuralgia caused by pathological conditions of the intervertebral

foramina and especially of the intervertebral articulations. In other words, sciatica is a symptom of neurodocitis and lumbarthritis.

The terms rheumatic sciatica and idiopathic sciatica should be substituted by the more precise and adequate one of *arthritic* or *vertebral sciatica*.

To treat the sciatica it is necessary to treat the arthritis.

The treatment of vertebral arthritis is based upon the same principles as the treatment of all other arthritis of non-specific origin, therefore active hyperæmia and immobilisation. When these two methods are inefficacious it will be necessary to resort to a resection of the diseased articulations.

An Address
ON
VISCEROPTOSIS.

A Contribution to the Discussion at the Meeting of the Association of Surgeons at Glasgow on May 5th, 1927.

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(*Concluded from p. 4.*)

SYMPTOMS.

THE clinical importance of cases of visceroptosis lies in the fact that their symptoms so closely resemble those of localised organic lesions, the treatment of which is almost wholly surgical. It is the one condition which causes difficulty in the diagnosis of abdominal disease. As a general rule, the mimicry is incomplete, and it is not a difficult matter to say that a patient is suffering from ptosis, but it is often extremely difficult to determine whether there is in addition some organic lesion. In the earlier stages the symptoms are frequently localised to one viscus, so that it is convenient to consider them under the heading of the lesions which they simulate. Later in life, or in the more advanced cases, the changes become more widespread and the symptoms correspondingly generalised. The actual symptoms of the individual groups have been so frequently discussed that it is unnecessary to consider them again in detail. The points of distinction upon which stress must be laid are that the condition is much more common in women, and that in them there will have been the onset of abdominal symptoms soon after puberty, and while they are yet at school. From this time the patient is rarely free from trouble, the characteristic periodicity of a chronic gastric or duodenal ulcer being absent; as she often expresses it, she "has always suffered from a delicate stomach and has had to take great care in her diet and life." The more acute attacks will usually only persist for a few days, but the intervals of comparative freedom will also be short. There will thus often have been a history of many years duration during which time symptoms have progressed little, if at all, and this will at once give a clue to the nature of the pathological lesion, for had there been any organic disease of the stomach, gall-bladder or appendix, it is certain that the organic condition would have progressed and the symptoms would have become correspondingly more severe. The pain will differ in its site and characters according to whether the symptoms resemble more closely a lesion of the stomach, gall-bladder, appendix, or kidney, but in general it consists of a dull, aching pain which is widely spread over the abdomen, in the gastric cases may be worse immediately after food, is of a dragging, heavy character, is increased when the patient is tired or worried, and is considerably relieved by lying down. In addition there are often attacks of more severe and almost colicky pain which are probably due to kinking of the stomach or large intestine. In the case of a mobile kidney the kinking of the ureter may cause colicky attacks very similar to those of a calculus.

Vomiting is a frequent symptom, and in the gastric cases is much more common and severe than is usually found with an organic lesion, probably owing to a gastritis secondary to the atony and prolapse. The vomiting does not completely relieve the pain, although it occurs at the height of the pain after each meal. In the gastric type of case, hæmatemesis is very frequent and is often severe, again because there is a secondary gastritis with the presence of erosions. The appetite is poor for the same reason, and in nearly every case the patient is constipated. In a certain group of cases there is irritation of, rather than stagnation in, the colon with the presence of colic and diarrhœa. Many cases of mucous colitis have, in fact, advanced general ptosis. Uterine prolapse is commonly present. On examination these patients are always tall, thin, energetic, and often, indeed, irritable people showing all the body characters of virginal ptosis. The constriction of the upper abdomen both laterally and anteroposteriorly is usually very evident. Dilatation of the stomach and cæcum is made evident by splashing and gurgling on palpation, and if the abdominal wall is very weak peristalsis may even be visible, but is never so strong and forcible as with a mechanical obstruction. The right kidney is generally mobile. Hyperæsthesia corresponding either to the stomach or cæcal areas is very common, and since such a condition is rarely if ever found with a chronic gastric ulcer, this sign is often a useful point in the differential diagnosis. Deep tenderness, if present at all, will be found over the whole area of the viscus—e.g., the stomach—and is not localised to a small mid-epigastric area as with a chronic gastric ulcer. In the variety appearing in middle-aged men there will, of course, not be the characteristic body changes, and often the only physical signs which are found are the presence of hyperæsthesia in the gastric area and a diffuse rather than a localised deep tenderness.

The test-meal may be very confusing, for not uncommonly these patients have a high degree of acidity. The highest free acid which I have ever seen was 0·35 per cent., and was found in a patient who had only visceroptosis. This fact should always be kept in mind, for if the symptoms resemble a pyloric ulcer the presence of such a high acidity may seem to confirm the diagnosis. In the more acute cases in young women the acidity tends to be low, and in the atonic type found in middle-aged men the absence of free HCl is very common owing to the presence of gastritis, thus increasing the difficulty in the distinction of this type from carcinoma of the stomach.

X ray examination is of very great value. On the screen it will be found not only that the stomach and colon are much lower than normal, but in nearly every case the ptosis is associated with atony, and hence there is a very marked difference in the position of the viscera when the patient is erect or lying down. The stomach, the cæcum, and often portions of the colon, are exceptionally dilated, and there is very considerable delay in the passage of the opaque meal. Kinking and delay in the passage owing to the accessory bands and adhesions is, as Jordan has demonstrated, often evident. Local areas of spasm, maintained for a relatively long time, are not uncommon in both stomach and colon, the latter being most often seen in the acquired varieties at or about middle age (Fig. 3). Of equal value with the positive findings is the absence of any indication of the organic disease which is so closely simulated by the symptoms. In the difficult cases in women, for instance, there is no evidence of a penetrating ulcer of the lesser curve or of a duodenal ulcer, and in many cases the appendix is found to fill normally, so that the diagnosis of chronic appendicitis is unlikely. It must, of course, be remembered that ptosis in itself may in people with a good postural tone give rise to no symptoms, and therefore its mere presence, as demonstrated by X ray investigation, does not exclude the possibility

of some other disease. Especially must this be remembered when the symptoms are those of chronic cholelithasis or chronic cholecystitis, and it may be necessary with the clinical picture of this disease to carry out a special investigation after the administration of tetraiodophenolphthalein. It is in the acquired cases in men where the symptoms are those of early carcinoma of the stomach that difficulty may specially arise, for in such early cases the X ray evidence may be very doubtful, and this is also true with the small posterior chronic ulcers. Hence, even with the most careful investigation, it is not always possible to avoid operating for a supposed ulcer or early carcinoma, only to find that the symptoms are due to ptosis.

TREATMENT.

There is no condition in surgery which has led to so many fallacious and useless operations—fallacious because the operation has been so frequently carried out in the belief that some organic lesion is present, and useless because only too frequently attention has been directed wholly to one of the many pathological changes, and a form of treatment has been lauded and widely carried out in the belief that the overcoming of that one pathological change would lead to a complete cure of all symptoms. A wider appreciation of the fact that the symptoms are due to a combination of a congenital error with an acquired loss of postural muscular tone, will make it evident that attention must at first be wholly directed to medical methods of overcoming the acquired disability. As far as I am aware, practically no case can be said to have died directly from the effects of ptosis alone. It has been frequently held out as an indication for operation that virginal ptosis is the direct cause of many organic lesions, and it has been my aim to show that my own experience does not support this view. It is becoming to me, at any rate, more and more evident that ptosis is not the cause of gastric ulcer, of gall-stones, or carcinoma, or of chronic appendicitis, although in rare cases it may be complicated with any of these conditions. As far as my own experience goes in a follow-up department which has been in existence for a period of eight years, there is a tendency for the symptoms of virginal ptosis to die out as the patient gets older, but my experience as yet is insufficient to be dogmatic on this point. I think the majority of surgeons with wide abdominal experience will agree that it is very seldom necessary to have to give treatment to unoperated cases of virginal ptosis in patients of over 60, nor—if one excludes the cases of Hirschsprung's disease and volvulus, which should very doubtfully be included with ptosis—is there any indication that these patients die as a direct cause of their disease. On the other hand, we have all of us had only too wide an experience of the miserable subjects of extensive forms of operation. There is perhaps no condition which is so distressing to a patient as the severe abdominal symptoms and upset in the progress of their life as the after-results of unsatisfactory forms of treatment, such as is seen after wide fixation, lateral anastomosis, or resections of the colon, and it must always be remembered that these operations, however carefully performed, not only carry with them a direct immediate mortality, but there is a secondary mortality after they have been initiated. It may therefore be said that in no case of visceroptosis should operative treatment ever be considered until medical measures have been thoroughly and conscientiously carried out. Unfortunately, in but few of these patients is it possible to carry out the ideal treatment. If we could remove them from the disabilities of their work and could transplant them, while still young, to a healthy country life and air with congenial outdoor work, or if we could order the poorer and overworked patients a prescription of £500 a year, a cure would probably soon follow. These people are unsuited to the strain of civilised life, but the difficulty is that few, if any, of them are able to be removed from their surroundings. Attempts must therefore be made to improve their symptoms by medical measures which aim at improving their diet, at overcoming their abnormal bowel action, at increasing their postural tone, and at improving their mental outlook on life. By such means a very great deal can be accomplished, although as long as they continue under the influences which have produced their symptoms their abdomens will always be their weak points, and therefore they can rarely be regarded as completely cured.

Limitations of space will prevent a detailed consideration of the various surgical measures which have been advocated, but it is important to consider the indications for operative interference. Even with the greatest care in making a diagnosis we shall still, for a time, operate upon some patients in the belief that an organic lesion is present. Apart, however, from these accidental cases, the indications for operation are:—

1. The patient must have had a careful and complete course of medical treatment. Not only must this have failed to give relief, but the patient must feel that under her conditions life is intolerable, and that she would be willing to change a condition of discomfort which carried no risk of life for a surgical adventure which may succeed in giving her relief, but at the same time does give a definite small percentage of vital risk.

2. Operation should only be performed if the symptoms are definitely localised to one viscus. If they are widely spread over the whole abdominal contents, no operative measure is likely to give any lasting relief. On the other hand, we are all conversant with cases where the symptoms are localised to one organ where an almost complete symptomatic cure can be brought about by operative interference. For instance, a patient who has a mobile kidney with kinking of the ureter can usually be cured by a well-performed nephropexy, and in the same way operations directed to the stomach or cæcum may give a great deal of relief. As regards the actual operative technique, any operation upon one viscus should first of all aim at the complete and free division of all the accessory membranes and bands, but it must be remembered that such bands rarely if ever cause mechanical obstruction, although the gut appears to be tied down by a Lane's kink or a Jackson's membrane. It is very seldom indeed that one ever meets with a definite hypertrophy of the gut proximal to such a band, and it is this fact which must ever be kept in mind, for it is the belief that such a mechanical obstruction exists which has led to the wide introduction of operative treatment, and especially to the use of lateral anastomosis and partial or complete resection. Nevertheless, the kinking of such bands may possibly give rise to spasmodic contractions, and hence they should be freely divided before any form of fixation is carried out. Some of my cases have been very greatly relieved by gastrocolopexy. This operation I have carried out in 31 instances only, for it has only been performed in those cases where medical treatment has failed, and where the symptoms have been localised entirely to the stomach. Under such conditions the relief is often very considerable, but even then it must be combined with careful after-medical treatment. Of the various methods which have been introduced, I much prefer the Coffey operation as not only giving a firmer and wider fixation but as interfering less than any of the other operations with the normal action of the stomach. Cæcopexy, in a similar way, is an operation of limited application. I have only performed it eight times in my series, and since these cases have been most carefully selected a considerable relief has followed. The wide introduction of the Wilms operation or its modification as advocated by Waugh is, however, likely to lead to disastrous results. There is not the slightest evidence that the whole series of changes and symptoms is dependent upon any primary change in the cæcum, and I have only too frequently met with cases where this operation has been inadvisedly performed and has led to

no relief, but rather to an exacerbation of the symptoms.

In the use of lateral anastomosis the same care has to be exercised. It is remarkable in reading the literature on the performance of duodeno-jejunostomy for duodenal ileus to observe what very great difference of opinion there is as to its value, and I cannot help but feel that it has been performed in many cases where it is unnecessary. In my own series there have only been five cases of very definite duodenal ileus where this operation has been performed. In two of them practically a complete cure of all symptoms has followed, although the patients have still shown all the characters of virginal ptosis. In the other three, relief has been less complete, and medical measures still have to be carried out. For the dilated and atonic stomach, the use of gastro-enterostomy has been generally found to be so unsatisfactory that it may be said to have been abandoned, and I think there are very few surgeons to-day who will advocate its use. Even for the dilated and atonic colon these operations of lateral or end-to-side anastomosis are beginning to fall into disuse. So many cases have been reported, and even more have been known, where the condition of the patient has only been made worse, that it has not been widely adopted. Only too often the loop or excluded portion of the intestine continues to fill up by a retrograde passage of the contents, so that the patient's life is made more miserable, and indeed not infrequently subsequent operations have to be performed simply to overcome the added disability of the lateral anastomosis. In a few cases where the atony and dilatation is limited to the cæcum some relief may be obtained by these measures, and especially if they are combined with cæcostomy or appendicostomy, but such cases are relatively few.

Resection of gut also has a much narrower scope than was at one time believed. If the evidence could be accepted that the primary change was in the large intestine, and that the alterations in the small intestine and stomach only followed a prolonged dilatation and stasis in this part of the gut, it would be very tempting to remove a portion or the whole of the large intestine in the hope of bringing about a complete cure, and it was on such an assumption that Lane's operation became at one time extremely popular, but in the experience of most surgeons the results have not come up to our expectations. In the hands of the majority of surgeons the operation can certainly not be described as one of only moderate severity, but is one carrying with it a very high mortality. Nor do the after-results give complete satisfaction; in only too many cases the small intestine becomes atonic and dilated, and the patients complain of symptoms often more marked than those before the resection. Either frequent diarrhœa or a steadily progressive intestinal obstruction, sometimes of a mechanical nature, are by no means uncommon complications. Partial colectomies, either with removal of the cæcum or ascending colon in long-standing cases, sometimes give considerable relief, but here, again, the operation not only carries with it an immediate danger to life, but there is a risk of subsequent obstruction by adhesions and the recurrence of the original symptoms by spread of the atonic condition to the remaining portion of the large gut. As with the other forms of operative treatment, a partial colectomy therefore should be reserved for these cases in which the symptoms and pathological changes are almost wholly limited to a small portion of the intestine. It has been of some interest to me in analysing my own cases to find that the greater number of those in whom I have had to perform anastomoses or partial and complete colectomies have been patients who have already had a large number of previous operations elsewhere, so that interference of this sort has in part, at any rate, been necessary to overcome the effects of operative treatment as much as for the original disease.

The fact that the pain is spasmodic in character is suggestive that it may be due to overaction of the sympathetic nerves. The satisfactory results obtained by Hunter and Royle in division of the sympathetic to overcome spastic diaplegia, by Leriche and Benisty in the treatment of Raynaud's disease, and other spasmodic conditions of the artery by division of the sympathetic supply, and by the use of Jonesco's method of removing the stellate ganglion or other portions of the cervical sympathetic in the treatment of angina pectoris, has often led me to think that relief might be obtained by the introduction of similar methods in the treatment of visceroptotic pain. Such methods would, however, be surrounded by considerable difficulty. Anatomically, it would not be a matter of great difficulty to expose the sympathetic cords in the upper abdomen, but the supply is so wide that one would have the choice of division of the three splanchnic nerves and the sympathetic cord on either side, giving eight alternative paths, and one cannot help but feel that if the pain is due to sympathetic overaction relief should lie in the future, not in the cutting off of the afferent and efferent impulses along the sympathetics by surgical treatment, nor by controlling these impulses with medical treatment and drugs, but rather by the wider introduction of a healthier open-air life. These patients should, in fact, make use of the prescription given us some time ago by Kipling: "They should dig till they gently perspire."

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MANCHESTER INSURANCE COMMITTEE: OPENING OF NEW OFFICES.—In connexion with the formal opening of the new offices of the Manchester Insurance Committee at Ardwick on June 28th, Mr. L. C. Brock, Principal Assistant Secretary to the Ministry of Health, said they had succeeded in securing the smooth working of a medical service which now embraced 13,000 doctors, a full third of the population, and covered the whole country. The medical service had been steadily improving, but there was one feature which gave ground for uneasiness—the steady and continuous increase in the expenditure on and in the consumption of drugs and medicines. This applied particularly to Manchester. During the last year the insured population of England and Wales got on with rather less than 4¼ prescriptions per head; but in Manchester they were 6·60 and in Salford 6·84, so that Manchester received 50 per cent. more prescriptions than the average of the country as a whole. Each Manchester prescription cost a little more than 9*d*. This was indicative of a wrong attitude of mind on the part of the insured population. Moreover, the consumption of dutiable medicines had increased, and it looked as if we were on the way to becoming a nation of medicine drunkards.

The Manchester Insurance Committee is responsible for the adequate medical benefit of more than 330,000 insured persons. During the last year over £140,000 was disbursed by the committee for medical treatment, comprising about 2,000,000 services and upwards of £77,000 for medicines and appliances. In the 15 years of medical benefit up to last December the total expended in Manchester on treatment was nearly £1,700,000, and on medicine and appliances £582,000.

LACTIC ACID MILK AS A ROUTINE INFANT FOOD.

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LACTIC acid milk has for several years been extensively used by pediatricians in America as an artificial food for infants. It has not, however, received much attention in this country. Its most prominent advocate is W. M. Marriott, of St. Louis, whose work one of us (E. R. Walker) had the opportunity of seeing three years ago. The results seemed so satisfactory, and compared so favourably with those obtained by other methods of feeding, that we determined to give it a thorough trial. This paper is based on a study of 50 infants so fed at the Burnside Infant Welfare Home, Aberdeen.

Marriott and Davidson [1] analysed the records of all infants under 1 year of age in the St. Louis Children's Hospital for a period of two years, during which whole lactic acid milk was used as a routine feeding. Infants suffering from proved tuberculous meningitis and septicæmia were excluded, but no other selection was made. From the remaining 142 records the following results were obtained. The average period of feeding was 22 days, and the average gain 0·9 oz. Commenting on this, the authors say: "This satisfactory nutritional result in a group of sick infants under hospital conditions has served to confirm our original impression of the value of the food of type described." They state that the infants rarely developed diarrhœa or vomiting, whilst the mortality amongst athreptic (marasmic) infants fell from 78 per cent. four years earlier to 26 per cent.

Rationale of "Buffer" Action of Milk.

The acid-binding or "buffer" value of sweet cow's milk is three times that of human milk, and it is this characteristic which chiefly renders cow's milk difficult of digestion by the infant. Marriott and Davidson [2] have shown that in infants fed on whole cow's milk the H-ion concentration of the gastric contents is greatly lowered. The deleterious effects of the lowered gastric acidity thus produced are of importance. The bactericidal properties of the gastric contents are distinctly reduced, and the alterations in digestive processes are numerous. Peptic digestion is seldom possible at the concentrations reached, which in Marriott's cases averaged pH 5·1, peptic digestion beginning at pH 4 and being optimum at pH 2·5. The importance of peptic digestion is not completely understood, but it is believed that the peptone so formed has a stimulating effect on the flow of bile and pancreatic secretion.[2] Of greater importance, however, is the denaturation of protein by rennin coagulation. The latter occurs at a pH about 5·5, and any lesser acidity than this favours the passage of unchanged protein through the pylorus. This is of particular moment in athreptic infants and in normal infants of less than two weeks old, in whom it has been shown that unchanged protein can pass through the intestinal wall into the general circulation.[3] It is conceivable that this process may be sometimes of ætiological importance in the rare cases of idiosyncrasy to cow's milk. Many infants, of course, by acquiring greater powers of gastric secretion overcome these difficulties and apparently thrive on whole milk. It is difficult not to feel uneasy about the possible after-effects of this over-secretion, and Pritchard [4] has recently recorded his misgivings on that score. Sweet whole milk, however, is not often advocated nowadays.

Dilution of Cow's Milk.

Dilution of cow's milk will get over these faults, but is unfortunately attended by defects of its own. Clinically it has been recognised as desirable to lessen the degree of dilution as soon as this may be successfully accomplished without digestive upset in the infant. The explanation of the shortcomings of high dilutions is to be sought in the nature of the proteins of the two milks. Of the two principal proteins—lactalbumin and caseinogen—lactalbumin much more closely resembles the body proteins in the composition than does caseinogen, and 54 per cent. of the protein of human milk is lactalbumin as against only 14 per cent. in cow's milk. Cow's milk is, therefore, for the purpose of feeding human infants, relatively deficient in essential amino-acids, notably tryptophane, and much more of its proteins must be fed if the full complement of "building-stones" is to be provided. Since the total protein of cow's milk is three times that of human, feeding whole milk will meet the requirements.

Lactic Acid Milk.

From these considerations it appears that some other method than dilution should be attempted in order to render cow's milk suitable to the infant digestion. To this end acid can be added to whole milk in amounts calculated to overcome the excess of "buffers" and so maintain in the infant's stomach an H-ion concentration similar to that occurring in natural feeding. Hydrochloric acid, vinegar (acetic acid), lemon juice, and lactic acid have all been used. Hess [5] has recently advocated orange juice for this purpose. It has apparently a favourable effect on protein solubility. Hydrochloric acid would seem to be the most logical one to choose, and has been strongly championed by some workers, notably Faber.[4] It has, however, certain disadvantages. It is an inorganic acid, and therefore tends to lower the body alkali reserve when given in amounts large enough to exert its anti-buffer action in the stomach. Also, according to Wills, Sanderson, and Paterson,[7] it seriously lessens the retention of calcium. Lactic acid is an organic acid occurring naturally in the metabolism of muscle and other cells, and is completely oxidised in the tissues. It has also the advantage that at the concentration necessary to produce its anti-buffer effects lactic-acid forming organisms alone can flourish, whilst pathogenic organisms are destroyed or at least inhibited (see table).

Table showing Effect of Lactic Acid on the Bacterial Count of Milk.

Sample No. 1.

	Count per c.m.	*B. coli* present in—
(*a*) Lactic acid portion.		
1st pl. 2 hrs. after L.A.	800,000	0·01 c.m.
2nd pl. 24 hrs. after L.A.	128,000	0·01 "
3rd pl. 48 hrs. after L.A.	170,000	0·01 "
(*b*) Control portion.		
1st pl.	2,000,000	0·01 "
2nd "	6,400,000	0·01 "
3rd "	7,400,000	0·01 "

Sample No. 2.

(*a*) Lactic acid portion.		
1st pl. 2 hrs. after L.A.	6,000	0·1 "
2nd pl. 24 hrs. after L.A.	1,300	0·1 "
3rd pl. 48 hrs. after L.A.	900	0·1 "
(*b*) Control portion.		
1st pl.	17,000	0·01 "
2nd "	19,000	0·01 "
3rd "	27,000	0·01 "

pl. = plating. L.A. = addition of lactic acid.

These counts were made by Dr. Smith, bacteriologist to the City Hospital, Aberdeen, to whom our thanks are due.

Naturally, soured milk—i.e., by inoculation with *B. acidophilus* or other lactic acid producer—is probably the best form for infant feeding, but a quite satisfactory form can be prepared by the addition of pharmacopœial lactic acid to whole milk, in the proportion of 1½ drachms to the quart. This gives a concentration of about 0·5 per cent. The acid is stirred into the milk (which must be cold), the last half being added very slowly drop by drop, and thoroughly stirred in, to prevent the formation of

large curds. As the last drops are added a fine flocculent curd appears. Sugar is added in the amount and in the form considered advisable. Most healthy infants will take cane-sugar quite well, and this can be conveniently added in the form of golden syrup in the proportion of one or two tablespoonfuls to the pint. In very young or weakly infants, where larger amounts of sugar may be required, a less fermentable sugar, such as dextri-maltose, is desirable, since considerable amounts can be taken without causing diarrhœa. Marriott [8] recommends corn syrup, which is prepared by the acid hydrolysis of starch, and contains approximately 55 per cent. dextrin, 30 per cent. maltose, and 15 per cent. glucose, and which has the additional advantage of being very much cheaper than dextri-maltose. Unfortunately, it is not easily procurable in this country; Mellin's food, however, is a comparatively cheap form of dextri-maltose.

Whole Lactic Milk Feeding.

In practice, milk prepared in this way possesses many advantages as an artificial food for infants. In preparation it is very nearly "fool-proof"—certainly more so than any satisfactory method of dilution feeding. Owing to its antibacterial properties it keeps well, and the whole 24 hours' supply can be prepared in about a quarter of an hour and put aside to be used as wanted. On account of its maintaining a physiological H-ion concentration of the gastric contents, it enables the infant to deal satisfactorily with food to the full amount of its nutritional requirements, even in the presence of parenteral infections, which are usually accompanied by serious lowering of the gastric acidity and handicapping dyspepsia. Healthy infants on whole lactic acid milk gain weight steadily and satisfactorily in the manner usually associated with healthy breast-fed infants, and like these they are firm and their muscles are of good tone.

Modifications of Whole Lactic Milk.

Certain modifications of the ordinary lactic milk are sometimes indicated. Various sugars can, as has been indicated, be used according to the nutritional and digestional requirements. Skimmed lactic milk is often very useful. It is prepared in the same way as the ordinary form, using skimmed instead of whole milk. It is of value in cases of fat intolerance with large soapy stools and failure to gain weight—Finkelstein's "Disturbance of Equilibrium." It is often helpful in diarrhœa cases, especially dysentery and enteral diarrhœas, where presumably the fatty acids, which are tolerated by a healthy mucosa, add insult to injury in one already irritated by bacteria and their toxins. Protein in some such form as Mead's "Casec" may usefully be added to raise the calorie value of the mixture and lessen fermentation.

Contra-indications.

With regard to contra-indications it seems, according to Wills, Sanderson, and Paterson,[7] that there is some reduction in the percentage retention of calcium, but since very considerable excess of this element is present, this does not seem to be of serious import. No signs of deficiency as a result of whole lactic milk feeding have been observed.

Of more serious significance is the observation of Clausen,[9] that in the presence of anhydræmia or circulatory failure from any cause there may be a very marked increase in the blood lactic acid, as much as 150 mg. per 100 c.cm., as compared with the normal 10–30 mg. with the production of acidosis. It would seem unwise in such a case to give lactic acid milk until the anhydræmia had been overcome, with resultant disappearance of the acidosis. Incidentally, it appears that over-enthusiastic attempts to combat the acidosis in these cases by means of alkalis has not infrequently led, when the acidosis had rapidly disappeared, to alkalosis, tetany, and death. A good many infants have probably been killed by baking soda. The aim in such cases of anhydræmic acidosis should be to restore the blood volume and circulatory function as early as possible by means of fluids administered enterally and parenterally, the acidosis disappearing spontaneously when this is accomplished.

There is considerable difference of opinion regarding the suitability of acid milk as a food for very young infants. Marriott considers that it can be used safely and with advantage from birth. Faber [6] recommends that it should not be used for infants under six weeks, while Parsons [10] gives three months as the earliest age for its exhibition. We have used it with gratifying results in several cases under three months. Faber gives the theoretical considerations which led him to set the limit at six weeks. Breast milk for the first ten days of lactation contains more or less colostrum and has a definitely alkaline reaction. The stomach of the new-born infant holds about 1 oz., so that if a feed, say, of 3 oz. be taken, a large part of it must pass through very soon into the small intestine, and much of the digestion must be intestinal rather than gastric. From this he concludes that it may well be advisable by increasing the alkalinity to lower the buffer resistance to alkaline change. Against this view it must be remembered, as has been pointed out, that such low H-ion concentrations favour the passage of unchanged protein through the pylorus, and that this, while it is probably of little moment and may even be of value in the case of human milk, is very possibly not without danger when cow's milk is being used. Indeed, Anderson and Schloss [3] have suggested tentatively that the entrance of the foreign protein of cow's milk into the blood of infants may have some causative relationship to the nutritional disorder in which it is found. Since whole lactic milk has a much higher calorie value than breast milk and dilution formulæ, a similar volume will meet the nutritional requirements. If not more than 2 oz. be given at each four-hourly feed and sterile water be given between feeds to maintain the optimum fluid intake, most of the early digestion is likely to be gastric, and duodenal disturbance will thus be largely obviated. One of the cases here reported was on lactic milk from birth, and has never been below the normal healthy weight line, in spite of a fairly sharp attack of bronchitis. Nevertheless, there can be no doubt that it is in the first month that it is most difficult to find a satisfactory substitute for natural feeding, and in our series the happiest results have been obtained in those infants who have had at least a month of breast feeding.

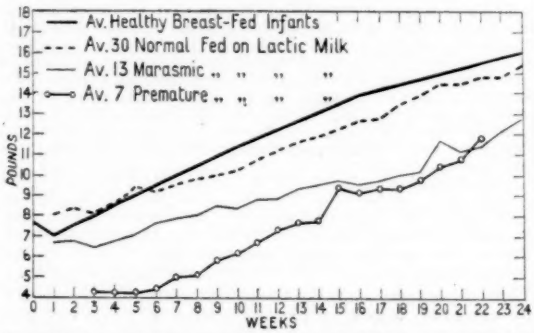
Results of Lactic Milk Feeding (50 Infants).

Every one of our 50 cases had at some time during the period of observation an upper respiratory infection, usually the ordinary "nasal discharge." Five had pneumonia, five dysentery (Sonne bacillus), and three whooping-cough, so that there was no undue selection. The age-period at which they were studied was 0–6 months, since after the latter age they almost all had additional food. The period of observation varied from two weeks to six months, the average being 8·8 weeks. The average weekly gain in weight was 5·0 oz. There were seven deaths during the period under consideration. The causes of death were as follows: Pneumonia, three; marasmus, two; prematurity, one; enteritis, one. The infants were divided into three groups: (1) normal, or slightly subnormal; (2) marasmic; and (3) premature. The accompanying weight chart of the three groups is self-explanatory.

Group 1.—There were no deaths in Group 1 in which there were 30 infants. The average gain in weight in these was 6·0 oz. per week. Three of these had whooping-cough, two dysentery, and one pneumonia. Amongst the remaining 24 the average weekly gain was 6·5 oz.

Group 2.—As a criterion for Group 2 we took Leonard Parsons's definition of marasmus: "The basal metabolism of the infant has been found to fall outside the limits o the normal when the child had lost one-fifth of its body-weight. A child, therefore, can be considered as marasmic

if its weight is less than four-fifths of the expected weight for its age." There were 13 infants in this group. The average weekly gain was 3·9 oz. Two had Sonne dysentery and one pneumonia. Excluding these the average gain of the remaining ten was 4·5 oz. Three of this group died, one of pneumonia, while the cause of death in the other two cases was given as marasmus.



Weight chart of the several groups of children, showing the results of lactic milk feeding.

Group 3.—There were seven premature infants, of whom four died, two of pneumonia, one of enteritis, and one of prematurity. The average weekly gain was 2·7 oz. Another had Sonne dysentery and survived. She is now doing well. Of the two who escaped serious illness, one gained 26 oz. in three weeks and the other 29 oz. in nine weeks.

Summary.

1. Fifty infants have been fed with lactic acid milk as a routine food. They varied in age from 1 day to 6 months, and the results were very satisfactory, comparing most favourably with those obtained with ordinary methods of dilution feeding.

2. The advantages of milk of this type as an infant food are: (*a*) Preparation. The milk is easily prepared, requiring no complicated calculation. The whole 24 hours' supply can be prepared at one time. (*b*) Relative sterility: On account of its nature, the milk remains free from harmful organisms for a considerable time. (*c*) Digestibility: The overcoming of the high "buffer" value of the sweet milk renders it easy of digestion for the infant. (*d*) Calorie value: The milk has a high calorie content, so that the full nutritional requirement can be given without excessive bulk.

3. The milk can be suitably modified in pathological conditions.

4. The milk should not be used in cases of anhydræmic acidosis until the acidosis has been overcome. Some authorities hold that acid milk should not be fed during the early weeks of life. We have used it in several infants of a few weeks old, and neither theoretical considerations nor clinical experience has led us to subscribe to this caution, provided reasonable care is exercised and over-feeding guarded against.

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Clinical and Laboratory Notes.

VERTEBRAL FIBROSIS:

"CELLULITE" OF THE NECK.

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THE fibrosis of subcutaneous connective tissue called "panniculitis," and the fibrositis of muscles, their fasciæ and sheaths, have been the chief localisations described by Swedish physicians under the name of "cellulite," and mentioned by L. L. Jones Llewelyn [1] in 1915 and Ralph Stockman in 1920. We have, I believe, no account of any other localisation.

I have for three years observed [2] at Aix-les-Bains in rheumatic and gouty patients on the one hand *nodules* located in the suboccipital region, on the transverse processes of the atlas, and on the other hand in the cervical grooves deep-seated *thickenings*, probably juxta-periosteal, which I believe to be due to "cellulite." This "cervical cellulite" gives rise to headache or to neuralgic pains radiating down the shoulders, the arms, and even precordial region, phenomena which may escape one's investigation and cannot, therefore, be properly treated until the practitioner ascertains their cause.

The following statement made by Stockman [3] confirms my opinion:—

"It is remarkable that this condition has attracted so little attention from medical writers. By Swedish physicians and masseurs the name 'myit' has for long been given to muscular rheumatism, and 'cellulite' to the somewhat similar pathological condition affecting the subcutaneous tissue. But until comparatively recently the latter has been almost unrecognised outside Sweden."

If the "cellulite" of muscles and the "panniculitis" which are comparatively easy to recognise have escaped observation, as Stockman says, *a fortiori* have the deep-seated nodules and the thickenings due to the cervical fibrosis passed unnoticed.

Signs of Cervical "Cellulite."

For the detection of the cervical "cellulite," the patient must either sit astride of a plat-backed chair facing the doctor, his arms crossed over the back of the chair, his forehead leaning on his arms, or be simply seated, his head leaning against the chest of the doctor. In either position the muscles of the neck are relaxed to allow of deep palpation. On both sides the tips of the fingers begin first to explore symmetrically the mastoid region and the transverse processes of the atlas. Then, getting nearer the median line, they penetrate the cervical grooves and gradually descend to the shoulders.

The knotty condition of the atlas feels like a globular tumour the size of a little nut, capping its transverse process, and more or less painful on pressure. The tumour is usually unilateral and situated on the left side. Its outline is sometimes sharp, at other times not clearly defined, and it may involve the transverse process of the axis. The thickening in the cervical groove appears either as a round cord or as little swellings, varying in size from a split pea to an almond, extending over several vertebræ, parallel to the articular processes, hard, tender on pressure, giving rise to pain radiating down the arm. It is to be noted that these conditions are much more frequently met with on the left side.

Diagnosis.

In the suboccipital region the anatomical conditions are most favourable for the development of

[1] L. L. Jones Llewelyn and A. Basset Jones: Fibrositis. London.
[2] Cellulite Vertébrale du Cou, Société Médicale de Paris, Mars, 1924.
[3] Ralph Stockman: Rheumatism and Arthritis. Edinburgh, 1920, p. 62.

"cellulite"—a remarkable association of tendons, ligaments, aponeuroses buried in connective tissue. The transverse process of the atlas gives attachment to numerous ligaments, tendons of six muscles, and their serous bursæ.

Radiography shows that these nodules and thickenings are not of bony origin, although it may happen that juxta-periosteal "cellulite" turns into osteo-periostitis, and thus produces a true bony nodule or an exostosis. Such pathological development is pretty frequently met with in gouty or so-called "arthritic" patients.

It is easy enough to differentiate a gland from the nodules or cellular tissue thickenings of the cervical space, for the glands are movable. It is a question of experience and delicate palpation which needs practice and much patience.

Symptoms.

Two kinds of symptoms are caused by cervical "cellulite": aches and joint troubles. Aches are by far the dominating symptom. According to the seat of the "cellulite" they differ.

To the "nodule" of the transverse process of the atlas are due headaches, cervico-occipital or epicranial neuralgias. To the thickening of the cervical groove is due the cervico-brachial neuralgia or neuritis with sometimes *pseudo-cardialgic* symptoms. Patients complain of a dull aching pain in the nuchal region and of permanent or intermittent pains spreading to the arms, occasionally accompanied with paræsthesias, numbness, and tingling sensations in the hands.

The pseudo-cardialgic symptoms are highly interesting on account of the errors of diagnosis they may lead to. They correspond to the irritation of the roots of the fifth and sixth cervical pairs. The pain is, as in sciatica, increased by effort and cough, and may make the patient anxious about his heart. Within two years Prof. Vaquez and I have met with two such cases.

Articular troubles.—The joint troubles caused by the "cellulite" consists in a certain stiffness of the neck and of the head. The amplitude of the movements is limited by a certain degree of contracture of the muscles, resulting from the painful joints of the articular processes (rotation of the head, lateral and antero-posterior flexion). In consequence the patient has to find for himself a good position in bed to rest his head, and is often awakened in the night by recurring pain due to the shifting of his position during sleep. Vertebral "cellulite" of the neck has been observed by me in arthritic subjects very frequently; about 20 per cent. of the cases of gout and chronic rheumatism.

The *treatment* by Aix methods: local natural vapour baths (radio-active) applied to the neck, followed by general and local douche-massage, has been most satisfactory. At home patients may be benefited by hot-air applications and skilled massage.

AN UNUSUAL CASE OF INGUINAL HERNIA.

BY W. B. JOHNSON, M.B. LOND., F.R.C.S. ENG.,
SPECIALIST, WEST AFRICAN MEDICAL STAFF.

THE following case presents features of interest which seem to be worthy of record.

A male native, aged about 45, was sent to me from a pagan district in the Northern Provinces of Nigeria with a large scrotal swelling reaching to the level of the knees. The history was indefinite, as nobody understood the patient's language, but it appeared that the swelling had been present for many years and that it had given pain and discomfort for several weeks. He was running an evening temperature of from 99° to 101° F. The bowels were opened with aperients.

Operation was performed under spinal anæsthesia with the assistance of Dr. W. E. S. Digby. The condition proved to be a right inguinal hernia with acquired sac. At the neck of the sac, below the external ring, lay a loop of small intestine which was adherent to the sac wall. Attached to the loop by a broad pedicle, and completely filling the greater part of the sac, was a cyst containing 4½ pints of brown semi-purulent fluid (presumably infected blood-clot). The cyst wall varied from ⅛ to ¼ in. in thickness, and the cyst was entirely shut off from the gut. Below the hernial sac, at the bottom of the scrotal swelling and entirely separate from the sac, lay the testis, the tunica vaginalis containing a small hydrocele of clear, straw-coloured fluid.

The cyst was cut away from the intestine, the wall of which was repaired with Lembert sutures; the intestine was freed and returned to the abdomen, and the sac was freed, ligatured, and cut away. Owing to the damaged condition of the gut after being freed from the adherent sac, a Kocher's tube was inserted into the peritoneum through the sac, and in view of the septic nature of the fluid within the cyst the scrotum was drained. The scrotum suppurated—a gas-forming organism being present—and further drainage was required a week after the operation. Otherwise recovery was uneventful.

Histological examination of the cyst wall by Dr. A. Connal showed that the inner wall consisted of layers of organised blood-clot; the outer wall consisted of a serous membrane, and the median portion of fibrous tissue with areas of muscle fibres. No mucous membrane was discernible, but the section was made at the level of the pedicle of the cyst.

The diagnosis appears to lie between (1) a Meckel's diverticulum which had become shut off from the gut and enlarged to its great size by repeated hæmorrhages into its interior, or (2) a degenerated fibromyoma of the gut wall.

A CASE OF PNEUMOCOCCAL SEPTICÆMIA.

BY A. L. B. STEVENS, B.M. OXF., M.R.C.S. ENG.

THE following case seems to be of interest:—

The patient was a schoolboy, aged 15½. He had had a chronic discharge from his right ear for some years and was also subject to asthma. At the beginning of February, 1927, he ran a slight fever of 99° F. and was confined to bed for a few days, afterwards making a satisfactory recovery. Many of his schoolfellows were ill in bed with similar symptoms at the same time.

On Feb. 15th he complained of earache and was put to bed. On the 16th his right ear began to discharge freely, signs of bronchitis developed in the chest, and in the evening temperature rose to 104·6° F. On the 17th there was a sharp attack of epistaxis and the temperature again rose to 105° F. in the evening, the ear still discharging freely. Signs of bronchitis became more marked and some blood-stained sputum was coughed up. Epistaxis recurred on the 18th, 19th, and 20th.

On Feb. 18th there was a sharp attack of hæmaturia which also persisted until death. On the morning of the 19th there were early signs of consolidation at the right base and by evening the whole of the right lower lobe showed typical pneumonic consolidation. The patient was restless and bright-eyed; there was a hectic flush on each cheek and he was suffering from want of sleep. Sharp pleuritic pain developed in the right side the same evening. The abdomen was tumid and there was definite enlargement of the spleen which was tender on pressure.

A blood culture was done the following day, Feb. 20th, and in 17 hours pure cultured pneumococci were obtained from all five tubes. The white cells of the blood taken at this time numbered 22,900. In the afternoon of Feb. 21st the patient became collapsed and perspired profusely. He died at 6 o'clock the same evening.

Throughout the illness there was no evidence of petechial hæmorrhages on the skin. There was at no time any indication of headache or other signs indicating involvement of the central nervous system. The case appears to be worth recording because of the acuteness of the infection and because it is comparatively rare to find that septicæmia of such virulence is due to pneumococcus. References in medical literature are few.

WESTMINSTER EYE HOSPITAL.—The foundation-stone of the new premises of the Westminster Eye Hospital in Broad-street, Bloomsbury, was laid last week by the Duke of Connaught, who spoke of the innovation of setting apart 14 rooms in the new hospital for patients who could not afford a nursing home, but were willing to pay for comparative privacy. It is estimated that the new hospital will cost between £20,000 and £25,000 a year as compared with the £10,000 needed for the old premises at Charing Cross.

Medical Societies.

PATHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

A MEETING of this Society was held in the new Institute of Preventive Medicine at Cardiff on July 1st and 2nd, Prof. E. H. KETTLE in the chair.

A. LEITCH (London) had found that the pancreas of a hen bearing a Rous sarcoma without any metastases would originate a tumour if minced up and inoculated into a fresh hen; the liver and other organs, similarly treated, gave negative results.—S. RUSS (London) immunised rats with injections of tumour tissue treated with X rays; those which were resistant to subsequent implantations of the same living tumour were also more or less resistant to other tumours; the reciprocal efficiency of immunisation varied among two sarcomata and two carcinomata.—F. A. PICKWORTH (Birmingham) found that a remarkably high proportion of asylum patients agglutinated typhoid, Gaertner and other allied bacilli; the homologous and heterologous responses to typhoid vaccine varied a great deal in different individuals. He suggested that chronic subinfections played some part in their mental state.—P. BRUCE WHITE (London) distinguished three kinds of unspecific agglutination, working mostly with rough Salmonella variants; simple salt sensitiveness, removed by extraction with alcohol and restored by encrusting the extracted lipoids on to the bacilli again; with heated rough strains alcohol had no effect; agglutination with any serum is removed by extraction by alcohol, leaving the specific serum agglutinability unaltered.—J. A. ARKWRIGHT (London) showed that agglutination by somatic and by flagellar agglutinins could be clearly distinguished microscopically, the clumps in the former moving about as a whole by the action of the free flagella.—G. H. EAGLES (Beckenham) had tried a Ramon flocculating test with scarlet fever toxin and antitoxin and found that the results had no relation to the neutralising power as measured by the skin test.—H. R. DEAN (Cambridge) had with some difficulty demonstrated that complement fixation does occur in toxin-antitoxin mixtures at about the same relative concentrations which give the best precipitation.—P. HARTLEY (London) tested the antigenic value of Ramon precipitates from diphtheria toxin; it is considerably depressed by the simultaneous injection of muscle extracts but not by peptone solutions.—T. DALLING (Beckenham), repeating his work of the previous year on the prevention of lamb dysentery, showed that less than 1 per cent. of the lambs of ewes dosed with welchii toxin-antitoxin died of the disease, while more than 8 per cent. of the lambs of control ewes succumbed. Of lambs receiving a dose of welchii antitoxin soon after birth 1 per cent. died compared with 20 per cent. of the controls. The variety of *B. welchii* which was constantly isolated from infected animals in Roxburgh, Northumberland, Wales, and Wilts seemed peculiar in several respects and may possibly prove to be another species.—J. F. GASKELL (Cambridge) had noticed that the virulence of pneumococci in culture is consistently lower in the summer months than it is during the pneumonia season from December to April, and that severe experimental lesions can best be obtained during the winter months.—H. D. WRIGHT (London) showed that the difficulty of testing the bile solubility of pneumococci in cultures containing serum and glucose arose from an acid precipitation of proteid.—J. McINTOSH and P. LAZARUS-BARLOW (London) for testing the fermentation reactions of streptococci recommended the use of poorly buffered media, phenol red as indicator, and rigorously purified sugars.—S. P. BEDSON (London) showed that the virus of herpes hardly ever comes through collodion filters which pass a good deal of the accompanying proteid; the virus must therefore be larger than the proteid molecule.—G. W. T. H. FLEMING (Dorchester) demonstrated the value of Jahnel's method for staining spirochætes in the nervous system.—A. PINEY (London) had studied the effect of large doses of X rays on the blood of rabbits. A pronounced leucopenia is followed by a transitory leucocytosis, lymphocytes are permanently diminished, red cells not much altered though nucleated forms may be abundant. The most marked internal changes are in the spleen and the animals waste away and die in about a month.—L. J. WITTS (Cambridge) described how the large lymphocytes, monocytes, and clasmatocytes of the blood and exudates could be readily distinguished by Sabin's supravital technique with neutral red and Janus green.—C. H. WHITTLE (Cambridge) found that agar or egg cultures were satisfactory for the routine determination of the mouse virulence of pneumococci.—R. W. BROOKFIELD (Liverpool) discussed the relationship between red cells showing punctate basophilia and reticulocytes in patients under treatment with lead colloid. On the whole the two vary in abundance in parallel and it is suggested that the stippled cells are regenerative forms (reticulocytes) modified by the toxic action of lead.—R. W. SCARFF (London) by feeding rabbits for a long time with cholesterol produced a considerable increase in blood cholesterol, no change in blood pressure, and extensive atheroma of the aorta and its larger branches without change in the smaller vessels. Changes most similar to those of human atheroma were obtained by feeding with cholesterol for six months, and then leaving the animal for six months before examination.—E. E. GLYNN and A. D. FORDYCE (Liverpool) exhibited a well-marked example of precocious sexual development in a boy of 2 years of the "infant hercules" type. There was a tumour of the left adrenal with metastases in lung and brain. The right adrenal was atrophied; pituitary and thyroid normal.—H. H. GLEAVE and G. WILSON (Sheffield) dealt with a case of suprarenal virilism in a women of 36, cured by removal of the tumour.—C. J. POLSON (Manchester) described a number of rabbit tumours (myosarcoma and carcinoma of uterus, carcinoma of kidney, endothelioma of peritoneum, &c.), two examples of lithopædion in rabbits, and an unrecognised carcinoma of breast which was the origin of extensive metastases.—G. S. WILLIAMSON and INNES H. PEARSE (London) pointed out that the active secretory (adenoid) tissue of the thyroid, commonly abundant in the fœtus, about puberty and during pregnancy, contains no iodine and none of the differentiating substance revealed by the tadpole test.—G. S. WILLIAMSON and HILDA CUNNINGTON (London) demonstrated the relation of the iodine content and tadpole activity of a number of different human goitres.—C. M. ACLAND (Cardiff) exhibited her method of mounting museum specimens in celluloid boxes.—S. L. CUMMINS (Cardiff) showed specimens illustrating the effect of sanocrysin on rabbits infected with tuberculosis. J. GORDON and F. C. HAPPOLD (Leeds) a carcinoma of the ovary in a hen, H. COLLINSON and M. J. STEWART (Leeds) a chronic ulcer of the stomach with miliary tuberculosis of the mucosa, C. E. JENKINS (Manchester) a new form of porcelain filter allowing the use of small quantities of liquid, E. E. GLYNN and C. H. WALSH (Liverpool) achalasia of œsophagus, the lungs in asphyxia from hæmoptysis and preparations from a case of ? quinidine poisoning, E. H. KETTLE and J. MILLS (Cardiff) specimens illustrating defence rupture in experimental streptococcal infections by calcium salts and other chemicals, and B. T. TERRY (Nashville) a rapid method of histological diagnosis by staining only one side of thick freehand sections.

NATIONAL ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS.

THIRTEENTH ANNUAL CONFERENCE.

THIS conference was held at the House of the British Medical Association on June 30th, July 1st, and 2nd. There was a large attendance of medical men and women, and representatives of various local authorities from all parts of Great Britain and Ireland. Sir ARTHUR STANLEY (chairman of the Council) presided throughout.

OPENING BY THE MINISTER OF HEALTH.

The conference was opened by Mr. NEVILLE CHAMBERLAIN (Minister of Health). He said he was glad to pay official testimony to the work of the Association, which had a long and brilliant record of voluntary work. He had noticed in the annual report that 35,000 deaths from tuberculosis had taken place last year. If in the remarks he was about to make he emphasised rather the decline in the mortality, it was from no desire to be complacent about the position, but only because the degree of success attained in the past made it appear more worth while to persevere in their efforts. Fifty years ago the death-rate from all forms of tuberculosis was 287 per 100,000; last year the rate had fallen to 96—a reduction to almost exactly one-third. What was the cause of this great reduction? It had been shown by Sir Archdall Reid and others that by a slow process partial immunity was acquired by nations. Possibly this same process was still going on, but no proof was available, and he himself preferred to ascribe the drop in tuberculosis mortality to two other factors: (*a*) the improvement that had taken place in the social surroundings of the people, and (*b*) the adoption of special measures. Among the conditions which affected the health of the people one of the most dominating was housing. The strongholds of tuberculosis were to be found in close and dingy dens which still existed in their large cities. The efforts which had been made to purify and ventilate these foul spots must have had much to do with the improvement that had taken place in the tuberculosis statistics. Since the armistice 894,000 new houses had been built, and this alone could hardly fail to have its effect in the future. He hoped it might be possible for him to introduce further legislation facilitating the efforts of local authorities to improve conditions in the worst areas. He was aware that country districts as well as towns were not free from those evils. He would be disappointed if the Rural Workers Housing Act, which was passed last year and which made provision for the reconditioning, repair, and enlargement of cottages in the country districts, did not provide in the future vastly improved accommodation for agricultural workers. With regard to the second factor he had mentioned, the outline or framework of organisation created throughout the country was fairly complete. Theoretically provision was made for the detection of every case of tuberculosis. Some of those present, however, might remember the schoolboy's essay: "The horse is a noble animal, but he does not always do so." The general practitioner was a fine fellow, but he did not always do so, as far as notification was concerned. Tuberculosis was said to be not an easy disease to diagnose, especially in the early stages. But the tuberculosis officers had ample opportunities for examining cases, and their expert advice was always available. After notification came prevention; the health visitor visited the home, advised the patient, and, if necessary, reported the condition of the house to the medical officer of health. Here, too, there was sometimes room for the better working of the machinery. The *county* authority might have investigated the case and felt that housing conditions might be responsible for the disease, but it was the *district* authority which was responsible for seeing that the condition was improved, and these two authorities did not always see eye to eye. After diagnosis came treatment, either by the patient's own doctor or by the dispensary, sanatorium, or hospital, according to the case. But in addition to those processes which he had been describing there were two other aspects of the question which were not wholly official—education and after-care. He was not sure, indeed, that they were any less important than the others of which he had been speaking. Salvation could not be forced upon an unwilling people. A good deal of ignorance upon the subject of tuberculosis still prevailed; many did not understand its infectivity, others did not understand its curability. Education was part of the work which the Association was carrying on with such success. The success of treatment largely depended on the after-care of patients discharged with disease arrested but not cured. They must remember that such people were not normal and that many would never become so. A return to conditions which were insanitary or unhealthy would probably entail a further breakdown in health. Papworth and Preston Hall had given them a vision of hope, of a possibility of a better method, but it was clear that colonies of that kind must require careful organisation, and even then could deal with only a limited number of cases. Further experiment was very desirable in that and in other directions. The establishment of care committees, he thought, was the greatest service that could be rendered. He had the highest admiration for the voluntary task which the Association had set itself. To his mind theirs was a scheme not only of broadest humanity, but also one that had a real national economic value.

Sir JOHN ROBERTSON (medical officer of health, Birmingham; professor of public health, University of Birmingham) then introduced a discussion on

PRESENT LINES OF ATTACK ON TUBERCULOSIS: THEIR RELATIVE VALUE.

The lay public, he said, was becoming every year more anxious to get rid of tuberculosis, and they were prepared to do what was right and to pay what was necessary. They were, however, mystified by the multitude of counsels which were given, with the result that it was difficult to get the concerted and long-continued effort on the things that were of importance. Those who were brought into contact with the whole problem could realise that the reduction in the number of new cases was far more important than the discovery of any panacea for the cure of the disease. There was a great temptation to look after the sick in the case of an illness like this and to neglect the more important principles of prevention. He submitted statistics of incidence of the disease both for England and Wales and for the United States which showed that the influences which were at work in producing a high mortality among males in both countries were very similar. There was a high incidence amongst males between the ages of 20 and 45, the rate of mortality during these years being somewhat uniform, while among females the highest mortality-rate was reached in the age-period of 20 to 25 years, after which time it rapidly declined until the age of 50 years was reached. Another chart displayed showed that for each of the age-groups there had been during the past 25 years a large reduction in mortality, except in the age-groups for females between 15 and 25 years of age, in which there had been a slight increase. The reduction, he was convinced, was a real one. He had been particularly struck by the greatly reduced incidence of tuberculous adenitis, although no statistics as to this were available.

The three outstanding events which had probably exerted the greatest influence in reducing the incidence of, and mortality from, tuberculosis were: the introduction of compulsory general education in 1870; the discovery of the tubercle bacillus and the subsequent methods of immunisation; and the establishment of antituberculosis schemes with their tuberculosis officers, sanatoriums, hospitals, and dispensaries. Of all these factors he believed that the better education of the people had had the most far-reaching effect. There could be no doubt that a modicum of general education

made the people dissatisfied with their unhygienic conditions of life and with the amount and cost of the food-supply, nor could anyone doubt that the exercise of good general intelligence was perhaps the greatest asset in the campaign against tuberculosis. In a large poor-class district in Birmingham, where ignorance prevailed, the rate of mortality from the disease was four times what it was in another area inhabited by intelligent artisans. The most effective method in the campaign was the increase of knowledge of healthy living. He urged the paramount importance of suitable and adequate nutrition and of an abundance of fresh air and sunlight. A very great deal remained to be done in regard to the question of the feeding of the people, although a great improvement had taken place in the last 70 or 80 years in the amount and quality of food available for the labouring classes. There were still people in every class of society risking their health in the dull light and stagnant air of badly constructed workplaces or dwellings. All who had taken an interest in sanatorium treatment for tuberculous patients or for other debilitated people could have no doubt as to the effect on the general metabolism of the body of abundance of fresh air and sunlight, even in cases where a very ordinary diet was given.

Dealing with the question of immunity, Sir John Robertson said it appeared to him that specific immunity was not a thing of value when dealing with the whole subject of tuberculosis, for they must presume that those who had now contracted tuberculosis had at one time or another received some tubercle bacilli which ought to have protected them against subsequent disease. Theoretically this explanation of a general specific immunity conferred by small doses of living tubercle bacilli might be correct, but it appeared to him a dangerous proceeding, and he doubted if any practising physician would knowingly allow his own children to receive such doses. The whole question of the resistance of the individual to infection was a puzzling one, and all of those present must at times have had difficulty in understanding why tuberculosis did not spread in particular cases—e.g., of husband and wife. In other instances they had evidence that the tubercle infection was of a most diffusible type, as was well seen when an infected cow was brought into a cow-house containing animals free from the disease. In such a case his experience was that tuberculous infection in the cow-house was about as diffusible as the infection of measles. Summing up, the speaker said that what was needed above all was a better general education by which alone a community was capable of grasping the meaning and value of knowledge directed to such a special subject as healthy living. The better the education of the masses the better they were able to appreciate the reasons for adopting those measures which maintain health. Special education in the prevention of tuberculosis was also essential. The antituberculosis dispensary as a means of spreading knowledge was probably the most important weapon they had in their campaign against tuberculosis. The lessons taught there were not confined to the tuberculous or the suspects, but reached a large proportion of the population.

Discussion.

In the course of the short discussion which followed DR. F. E. FREMANTLE, M.P., commenting on the fact that among males between 25 and 55 years of age tuberculosis mortality was almost at a standstill, whereas among females in those age-groups it was steadily coming down, suggested that it was because women were mainly at home and men were usually at work in shops or factories. He inferred from this that the source of infection was greater in factories and workshops than in the homes, however insanitary these might be. He thought that a great deal of the improvement that had been obtained in tuberculosis mortality was due to the earlier discovery of cases, and therefore to the lessening of sources of infection. The point he wished to make was the value of periodical medical examination of all insured persons, as was set out in the resolution submitted a day or two ago to the Minister of Health from the People's League of Health. He urged that medical men should address themselves to the task of discovering, defining, and arresting the cases of tuberculosis in this country.

DR. E. E. PREST (medical superintendent of the Ayrshire Sanatorium) drew attention to what he called the persecution applied to persons who had been in sanatoriums. The difficulty of getting a person into a sanatorium was largely due to the fact that it was difficult for him to obtain work afterwards. For the same reason doctors were often unwilling to notify cases. In the Inland Revenue Service, if a man had been in a sanatorium he was damned. How, therefore, could a private person be blamed if he followed suit? He had had a case in which a man after years of ill-health had lost his pension; his own doctor had not certified him as suffering from tuberculosis, but another doctor to whom he went at last did certify him. That was why they very often could not get cases until they could be diagnosed by a policeman on his beat. At present, he said, it was necessary for a person to be notified before he could be admitted to a sanatorium; this ought not to be so. If a man handling meat were examined and found to be tuberculous he was immediately notified and removed from his occupation. The result of this kind of procedure would simply be that they would stop all butchers from being treated.

Another speaker referred to the dangers of migratory cases of tuberculosis. Patients came to health resorts from London or from various sanatoriums; they did not call in a doctor; they came in the busy season and the rooms were not disinfected after them—often even the bedding was not changed. He suggested that it should be obligatory on sick people to report themselves.

DR. H. D. BISHOP (M.O.H., Guernsey) said that in a discussion on lines of attack they could not afford to omit a reference to the line of attack on bovine tuberculosis. Some 20 years ago Guernsey was considered to be free from tuberculosis. There was no case of tuberculosis among dairy cows. Later a few cows were sent to a dairy show in England and contracted tuberculosis. After they returned to Guernsey the tuberculosis mortality in human beings went up rapidly. For the last three or four years, thanks to unremitting care, tuberculosis in cattle had been unknown, and the tuberculosis mortality-rate had come down from 8·5 to 1·7. Incidentally the infant mortality had also come down; between 1910 and 1919 there were 41 deaths under 5 years of age, while during the past years there had been two only. An important regulation was that no animal was allowed to change hands, even between next-door neighbours, or to be exported without being tuberculin-tested. If a positive reaction was obtained that animal was followed up from farm to farm till they could be sure that the infection from that animal was stamped out. No less than 3000 animals were tuberculin-tested every year; last year there had been only two doubtful reactions, both of which on re-testing proved negative. The health of the bovine population was the health of the children.

The last speaker, MRS. POWELL (L.C.C.), urged that attention should be concentrated on the health education of the young mothers and also of the children.

SIR JOHN ROBERTSON, in winding up the discussion, said that he would like to have heard suggestions from the meeting as to what could be done to make the country so healthy that tuberculosis could not get a footing. He believed that persons who were perfectly healthy would not contract tuberculosis. He agreed with the last speaker that education of the women and children in health matters was of the most fundamental importance. Education should even come before improvement in economic conditions, since such improvement would probably in any case follow in its wake.

At the afternoon session the subject of Housing: Home Conditions was discussed.

(To be concluded.)

Reviews and Notices of Books.

MENTAL DISEASES.

Mind and its Disorders. Fifth edition. By W. H. B. STODDART, M.D., F.R.C.P., Physician for Mental Diseases to St. Thomas's Hospital. London: H. K. Lewis and Co., Ltd. 1926. Pp. 593. 21*s.*

Dr. Stoddart's book ranks high among standard English works on psychiatry. It is written in a clear, concise style, and is equally valuable to the student and the practitioner. The general scheme of the work is excellent, commencing, as it does, with a simple yet comprehensive survey of academic psychology. These opening chapters are of importance since the fundamental functions of mind are too often neglected by the medical psychologist. Dr. Stoddart differs from McDougal in several points, notably he stresses the importance of affection as opposed to conation as the fundamental process of the mind.

For this edition some chapters have been extensively revised and others completely rewritten to bring them into line with recent advances in pathological research. The classification of instincts is taken directly from the Freudian school, with which the writer is obviously much in sympathy. The omission of any reference to the recent work of Pavlov and the Utrecht school on the conditioned reflex and the infracortical localisations is disappointing. The last chapter in this section is mainly devoted to the Freudian theory of the ego and its relationship with the instinctive trends; this relationship is but poorly presented. The second part of the book is devoted to the psychology of the insane; the opening paragraph is not very happy, since it seems to indicate that the psychology of the abnormal differs fundamentally from that of the normal, but the text does not carry out this idea. The third part deals with the actual clinical entities. The classification is clear and concise, the neuroses, psychoneuroses, and psychoses being specially well differentiated. The author regards Graves's disease as a psychoneurosis and amenable to treatment as such; in the light of our present knowledge of this condition this statement seems too dogmatic. The section on melancholia and its differential diagnosis is worthy of careful study; rest, both mental and physical, is insisted upon as the essential part of the treatment. Dr. Stoddart does not distinguish between the melancholia of the involutional state and the depressed phase of manic-depressive insanity, but appears to regard them as the same clinical entity. The ætiology of manic-depressive insanity is viewed from the psycho-analytic angle, and here the author fails to carry conviction. Epilepsy is ranged among the psychoses together with alcoholism and drug habits; this may appear revolutionary, but Dr. Stoddart's arguments in favour of his classification are impressive. His careful observation and clinical acumen are particularly well shown in the description of the physical stigmata and psychological make-up of epileptic patients; but he has followed the teaching of Pierce Clarke rather closely and is probably too optimistic as to the value of psycho-analysis. The chapter on general paralysis has been practically rewritten; the references to the older forms of treatment have been much abbreviated, and space devoted to tryparsamide and malaria. The clinical types suitable for malarial treatment might have been more fully discussed. Idiocy and imbecility are accorded their place in the general scheme, and there is a good chapter on Binet-Simon tests.

The clinical part of the book closes with a chapter on case-taking methods which should be of great importance to the student of psychiatry. There are useful practical hints on general treatment. The book ends with a chapter on the insane and the law, which has been carefully revised; the practitioner will find this of value. The appendix on pathology is well illustrated, but the subject matter is very brief. Dr. Stoddart's book has one grave fault—the frequent interpolation of the findings of the psycho-analytic school, which are neither accounted for nor explained. These spoil an otherwise well-balanced volume. The chapter on psycho-analysis is too sketchy to be of any real value. On the other hand, the student will appreciate the constant manifestation of the author's deep knowledge of organic neurology. Reference is made to the latest work in this field and its importance is never overlooked.

Mental Abnormality and Deficiency. An Introduction to the Study of the Problems of Mental Health. By Prof. SIDNEY L. PRESSEY, Ph.D., and LUELLA COLE PRESSEY, Ph.D., Ohio State University. London: George Allen and Unwin, Ltd. 1926. Pp. 356. 10*s.* 6*d.*

THIS book is intended as an addition to the library of social workers and others whose duties bring them into contact with the emotionally maladjusted and morbid members of the population. The range of the book is comprehensive, the writers stating that they have in view what might be called a course in "applied abnormal psychology." Several chapters are devoted to the art of "case taking"; the need for tact and discrimination are emphasised, and most valuable instruction is given on the range of facts to be acquired for each individual case. In this connexion it is noteworthy that the religion of the patient is never included as a fact to be noted; yet it is surely possible that this might give some colour to the psychic background, especially as it is occasionally stated that Roman Catholics are less prone to psychoneurotic disorders than members of other religious communities. The case studies quoted at length are illustrative of the methods employed and also of the various types of mental disorder.

The second part of the book is devoted to a classification of various mental conditions: normality, the borderline conditions, the functional and the organic mental diseases, and finally feeblemindedness. Special attention is devoted to borderline conditions, which are classified under three headings—the emotionally maladjusted, the emotionally unstable, and the mentally peculiar; the two former groups are correlated with the psychoneuroses, and the latter group with the psychotic personalities. The grouping is rather loosely carried out, the diagnoses not being always in conformity with generally accepted standards. Encephalitis lethargica is not even mentioned as a cause of mental disorder, although one of the cases quoted seems reminiscent of this disease. There are some rather wide generalisations; for example, the use of instruments at birth is suggested as a frequent cause of feeblemindedness. On the whole, however, the chapter on feeblemindedness is comprehensive and clear, the problem being regarded as a social rather than a eugenic one. The numbers quoted for the United States (6·5 per 1000 of feebleminded in men of the ages covered by a draft during the war) are interesting when compared with those of the Royal Commission which estimates 4·6 per 1000 of the total population of England and Wales as feebleminded. Causation and treatment are fully and helpfully discussed, although the rigid analyst may not appreciate the description of his technique as "that quiet but persistent inquiry with regard to the patient's emotional difficulty which is essentially 'psycho-analysis.'"

The writers emphasise the necessity for the early study of mental cases and state that as a matter of fact a diagnosis should be simply a first generalisation in the study of the case; the effort should always be directed towards an intimate personal understanding of the individual.

A wide bibliography is appended at the end of many chapters, and in the appendix the work of Tredgold and of Burt is given prominence. There is also a useful glossary. The style is lucid but careless in

places, and the phraseology may be unfamiliar to the English reader. But he will be missing an interesting and inspiring study if he allows these trifles to prevent him from a careful perusal of the book.

PUBLIC HEALTH PROPAGANDA.

Better than Cure. A Handbook of Public Health Propaganda. By D. M. CONNAN, M.B., B.S. Lond., D.P.H., and H. W. BUSH, A.R.San.I. London: Noel Douglas. 1927. Pp. 172. 6s.

THIS attractively written book is designed to teach the propagandist how to impart knowledge on the prevention of ill-health to the lay public. It deals in 14 concisely written chapters with the need for propaganda, what, whom, and how to teach, the use of apparatus for the purpose, and the results of public instruction. The authors have had three years of intensive experience of publicity methods in the Health Department of Bermondsey, and they have proved that it is possible to arouse a lively interest in health among the people of all ages and social grades. Their use of the kinema and the "multiposter" sign is most ingenious, and some of their couplets show a keen perception of the sort of thing the ordinary mind will easily grasp and retain. For instance, the element of surprise is well exploited in doggerel such as this:—

> Shut your window, seal it down,
> The surest way to a heavenly crown.

And even the pun is forgivable in the caption to a poster:—

> Your Son and Heir
> Needs Sun and Air.

Unfortunately all such teaching is apt to be unjustifiably dogmatic. At the very outset the reader may pause at such statements as "the cause of tuberculosis and the methods of prevention are quite well known." We doubt whether the causes of tuberculosis are well understood, and even whether the methods of prevention commonly advocated and practised are the main reason for the recent decline in this disease. Again, is it really "safe to say that at least half the sickness due to these two classes of disease"—viz., digestive and rheumatic—"would never have occurred had the sufferers learnt to take care of their teeth"? The writers deprecate the corporate attitude of the profession in relation to press publicity, believing that "this antiquated attitude of mind is in direct opposition to the trend of the times" and that "the press is deeply concerned in public health matters." We suggest that the attitude of the press to unqualified practice must raise doubts as to the character of their interest in such matters. It is true that the daily press is the most effective channel through which the public can be approached, but it is at least doubtful if the sort of copy acceptable in that quarter is of the highest educative value. We agree entirely with the statement that "quite an elementary knowledge of the principles of hygiene is all that is required, but that knowledge must be accurate." The fault we have to find with the propagandists is that, in a pardonable anxiety to give the people something easily understood, they are apt to forget where knowledge ends and theorising begins. In fairness we ought to say that the writers of the book themselves emphasise this point, but they might with advantage apply the criticism to some of their own teaching.

RADIOGRAPHIC DIAGNOSIS OF BILHARZIASIS.

By Dr. G. O. LOTSY, Member of the Cairo Institut d'Egypte. Cairo: H. Friedrich and Co. 1927. With 11 pages of plates. Pp. 29.

THERE is ample justification for the publication of this monograph. As stated in the preface, there are many elaborate works on bilharziasis, but none has dealt fully with the radiographic aspect. Nowhere could this work have been undertaken to better advantage than in Egypt, where the author is a well-recognised authority on this subject. The text, which is simple and direct, appears in three languages—French, English, and Arabic; considerable stress is laid on the differential diagnosis, for the radiographic appearances of urinary bilharziasis are apt to be a source of difficulty to the young radiologist. In this condition the ureters are frequently involved, and it may be associated with ureteric calculi. These are well seen in the excellent plates, where the outline of the heavily infected bladder sometimes appears quite plainly. In intestinal bilharziasis the deposits of eggs in the large intestine give well-defined opacities of peculiar appearance. The admirable diagrams which accompany the plates greatly enhance their practical value.

Public Health Services.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

City of London.

The estimated population for 1926 was 13,230. The day population of persons actively engaged in the City is about 440,000 and possibly 1¼ millions of people and 100,000 vehicles enter and leave the city daily.

The 106 births and the 138 deaths allocated to the small resident population made rates of 7·1 and 10·4 respectively. Some of the classified death-rates were: tubercle, 0·91; cancer, 1·28; respiratory diseases, 2·0; and organic heart disease, 1·4.

The infant mortality-rate was 66, that for the whole of London being 64. There were no deaths from influenza and no notifications of puerperal fever or deaths of mothers from childbirth.

Dr. W. J. Howarth, the medical officer of health, states that although considerable improvement has been effected under the new Meat Regulations, it will be some time before conditions are entirely satisfactory. Owing to foot-and-mouth disease an embargo has been placed on pork imported from the Netherlands; as a result, the Irish Free State, the U.S.A., Argentina, and South Africa have increased their shipments. Caseous lymphadenitis is being noticed more frequently in sheep carcasses, and Dr. Howarth suggests that it should be made an offence to cut out lymph glands from mutton and beef, as it is at present n the case of pig carcasses. The Argentine and the Australian governments are both investigating the prevalence of this disease and have given instructions that no meat with glands cut out is to be exported. A considerable number of carcasses and heads of pork are condemned for tuberculosis. It is generally assumed, says Dr. Howarth, that the bacilli are of bovine origin, but inquiries made of the owners of diseased pigs show that frequently the animals have not been fed on cow's milk or been in contact with cows. The suggestion is put forward that the pigs may have been infected by fowls and that a pathological investigation to discover whether pigs may be infected with the avian bacillus might be useful. Slaughtering at Aldgate, which has been carried out for hundreds of years, ceased with the close of 1926. It is usual to examine about 50 samples of milk for tubercle. During 1926 the City bacteriologist, Sir Frederick Andrewes, reports that for the first time no tuberculous milk was found among the samples taken. The number of samples satisfactorily examined was only 34 owing to the premature death of some of the guinea-pigs. Under regulations dated 1926 importers of milk are required to register with the local authority, but no such importers have as yet been registered in the City. Progress is being made with the closure of houses in the Hutchison-street and Vine-street insanitary areas, and provision of accommodation for the displaced tenants is now well advanced.

The proportion of deaths in the City caused by injuries and violence was 2·3 above the average for the previous five years. The percentage was 7·2 in 1926, 5·3 in 1924, and 4·4 in 1925.

A suggestion has been put forward that a convalescent home might be established for the benefit of

the maternity and child welfare committees of the metropolis. Dr. Howarth points out that the charities peculiarly associated with the City make participation in such a scheme unnecessary.

Endeavour was made during the year to solve one of the difficulties of the tinned fruit trade. It is occasionally found that the tins are "blown," although the fruit inside is in perfectly good condition. These tinned products are sealed whilst hot, with the result that the ends of the container become concave on cooling. Several tins, the ends of which had become convex, were examined by the bacteriologist, who found that the contents were quite good to eat and that there was no evidence of bacterial action. The City analyst also examined them and thought that the "blowing" was due to a slight alcoholic fermentation. The circumstances have been reported to the Ministry in the hope that the matter will be further investigated.

Rat repression goes on actively. Dr. Howarth thinks that the number of rats is being kept down, but says that the old English black rat is now three times as numerous as the brown sewer rat. Old City men state that 30 or 40 years ago they were unable to enter their office in the mornings until the rats had been cleared out; these were brown rats, which had practically exterminated the black rats. The black rats now have their chance because the brown rats are being reduced by poisoning and trapping, and the overhead travelling facilities, by electric cables and the like, have been greatly increased for the black rat, who is a wonderful climber. The black rat needs less water than the brown rat and can generally find enough for his needs at sinks, dripping taps, fire buckets, and uncovered closet pans. If all food and water were adequately protected the rat trouble would largely disappear. In support of this it has been stated that Leicestershire mines are free from rats and mice for the first time in the memory of the oldest pitman, due to starvation caused by the coal strike.

SCHOOL MEDICAL SERVICE.

Name of district.	No. on roll.	Av. elem. school attendance.	No. of routine children examined.	No. of special examinations and re-inspections.	Percentage of children found on routine examination requiring treatment.*
Wigan ..	13,743	12,283	4,379	9,547	21·0
Hull	46,975	39,933	15,526	10,200	10·5
St. Helens .	20,357	18,303	5,984	13,602	44·17

* Excluding uncleanliness and dental defects.

Wigan.

The established position of the clinic as a necessary part of public health work is shown by Dr. H. Whitehead's insistence that the new tuberculosis dispensary (shortly to be erected) should also contain a dental department, an orthopædic clinic, a laboratory, and a section for artificial sunlight and X ray treatment. Children up to 5 years of age come under the maternity and child welfare scheme, and from that age pass under the school medical service with a direct continuity of their preschool records. During the year many sanitary improvements have been made in the schools and there is now only one school with pail-closets.

The compulsory notification of chicken-pox has laid an extra strain on the service, since every case was visited by a medical officer and subsequently by a school nurse, who also visits cases of measles, mumps, whooping-cough, and influenza. From the list given of the periods of exclusion from school for cases and contacts of infectious diseases it would seem that these periods are longer than obtain in most places. A table shows the percentage of verminous children in the schools to vary from 6 to 39; healthy rivalry might help to reduce this high figure.

Playground classes are held in some schools, and during last summer a school camp was established in which 701 boys and girls spent one week under canvas. Dr. Whitehead puts forward an eloquent case for an open-air school, and points out that there are 1200 children in Wigan in urgent need of such treatment. Although there is no organiser of physical training, games and sports are encouraged. The arrangements for an orthopædic scheme are now completed and will shortly come into force. Attention is called to the inadequacy of provision for exceptional children.

Hull.

Dr. W. Allen Daley pays a generous tribute to the late senior medical officer, Dr. J. Fraser, for his "sound conception and careful nurture" of the school medical service in Hull. The report, written by Dr. J. Morrison, formerly of Bristol, admits the slowness of progress and states that the Education Committee is beset with difficulties, not the least being the lack of funds. Myope classes were suggested by Dr. Fraser as far back as 1911, the possibilities of an open-air school were discussed in 1912, and several years ago the use of X rays for ringworm was recommended; but none of these things is yet in being. The need for more dental staff is pressing; the proportion of fillings to extractions stands at 1 to 10 for Hull, compared with 1 to 3 or 4 in the country generally. Ignorance and apathy on the part of the parents are contributory factors. Extra nurses also are badly needed.

The Hull authority have in their own deaf school an example of a wise expenditure yielding excellent results; a natural corollary would be the appointment of an aural surgeon to supervise and assist the work of the school; by the early detection of aural defects handicaps which materially reduce earning capacity might be largely eliminated. The craft classes are doing good work and have been increased, but, as the report states, "the masking of mental deficiency by means of dull and backward and craft classes would not appear to be desirable. Craft classes can be extremely useful as a means for observing doubtful cases and as an intermediary between the ordinary school and the special school both before and after a stay in the latter type." The great necessity is for closer medical investigation of the children concerned; this point is of wide general application, for dull and backward children are also, in a large proportion of cases, physically defective. From every point of view it is essential that they should be under special medical supervision.

This report, as for many years past, makes interesting reading.

St. Helens.

The large percentage (44·2) of defects found in the school-children does not necessarily mean that the general standard of health is lower in St. Helens than in other comparable areas, but rather indicates the adoption of a stricter standard by the inspecting medical officer; for example, 23·9 per cent. of the children examined were noted as having tonsils and adenoids, though only 1·6 per cent. were referred for treatment. In his detailed lists of treatment carried out from 1921–26, Dr. Frank Hauxwell shows how the ordinary school-child is looked after and how defects are treated, but the report indicates also how much the exceptional child is neglected, and its main theme is a well-reasoned plea for the provision of facilities to treat this type of child. The new orthopædic scheme was inaugurated on Oct. 1st and already 40 children have been treated. The immediate urgent needs are for: (*a*) Extension of dental inspection and treatment to include all school-children. (*b*) An open air school. (*c*) An additional clinic for minor ailments and dental defects. (*d*) A special school for cripples. (*e*) Provision for the partially blind. (*f*) Provision for the cardiac cripple. The supply during the year of 2,061,093 school meals, of which 2,053,228 were provided free, scarcely masks the lack of treatment facilities apparent from a perusal of Dr. Hauxwell's report.

THE LANCET.

LONDON, SATURDAY, JULY 9, 1927.

RESPONSIBILITY FOR CERTIFICATION OF THE INSANE.

THE law relating to the responsibility of the medical practitioner for the certification of an insane person cannot be left in its present deplorable state of uncertainty. There is a pleasant maxim or fiction of English jurisprudence that everyone is supposed to know the law, or at any rate that no one is to be excused for not knowing it. Mr. Justice MCCARDIE has made it clear, when giving judgment in DE FREVILLE *v.* DILL, that one of the most careful and learned judges of the Supreme Court is in doubt of the legal principles applicable to the doctor who certifies a lunatic. He expressed the hope that before long the House of Lords would give a clear and final decision upon the two outstanding points of uncertainty. Each of them, he said, was a matter of grave importance both from a legal and a practical point of view. It is indeed regrettable, as Mr. Justice MCCARDIE remarked, that so great a difference of opinion should exist and that a judge at trial should be beset with difficulty and doubt for want of knowing which of the previous decisions he should follow For the medical profession the incertitude is paralysing; its members are embarrassed by exposure to an indefinite personal liability.

The two points at issue, familiar though they are, may be briefly stated once more. The first is the question whether a medical practitioner, when summoned to express an opinion upon the sanity or insanity of a person, owes to that person any duty in the legal sense to exercise care. Dr. DILL was called in to examine Mrs. DE FREVILLE at the instance of her husband or her father-in-law. Mrs. DE FREVILLE did not call him in; she never employed Dr. DILL; she made no contract with him nor did she ever consent that he should act as her medical adviser. Dr. DILL, in examining her and forming his opinion, was acting on behalf of others, not on her behalf. Does a doctor in such a case owe any legal duty of care to the person he examines? It is amazing to find that, although this question stands upon the threshold of such litigation and has frequently been discussed in the past few years, there is no clear answer thereto in any judgment by the final appellate tribunal. Mr. Justice MCCARDIE had to approach the question without the guidance necessary. It is plain that a surgeon who operates negligently on the body of a patient is liable in damages, though there is no contract between the patient and himself. So, too, is the physician who is negligent in giving the patient medicine. Dr. DILL performed no operation and gave no medicine. He merely discharged the rather unwelcome function of intervening between members of a family and expressing an entirely honest opinion that Mrs. DE FREVILLE was a person of unsound mind and a proper person to be taken charge of and detained under care and treatment. On the whole, Mr. Justice MCCARDIE came to the conclusion that the balance of legal authority leaned towards the principle that Dr. DILL did owe Mrs. DE FREVILLE a duty of care. The second question is whether the medical practitioner's certificate is the cause of the certified person's detention. As is well known, the machinery of the Lunacy Act interposes between the certifying doctor and the person certified a vital link without which the person cannot be detained as a lunatic—namely, the judicial consideration of the evidence by a magistrate who, after satisfying himself that the evidence is sufficient, orders the detention. Mr. Justice MCCARDIE definitely states that, in the absence of other legal authority, he would have thought that the effective cause of Mrs. DE FREVILLE'S detention was the order of the magistrate and not the certificate of Dr. DILL. The decision under the Lunacy Act lies with the justice, not with the doctor. The justice can decide as he pleases, whatever the certificate says. Parliament has invested him with a statutory judicial authority in addition to the ordinary jurisdiction of his ancient office. He has full discretion, and he adjudicates *pro tempore* upon the matters placed before him. The doctor's certificate, though an essential requirement, is a mere opinion which of itself possesses no operative force. But here again, after endeavouring to weigh against one another the conflicting views of earlier judges, Mr. Justice MCCARDIE inclined to consider that he was bound by the greater weight of authority to decide against Dr. DILL, though he added that he doubted whether the full effect of the recent case of HARNETT *v.* BOND had been adequately realised.

In reaching, evidently not without misgiving, these two conclusions adverse to Dr. DILL, the learned judge made no attempt to disguise their seriousness to the medical profession. The passage in his judgment which dealt with this aspect calls for the immediate attention of Parliament. During the past seven years, he said, many medical men, acting in perfect good faith, have been exposed to the most prolonged, harassing, and costly litigation on the allegation that they have acted without reasonable care in a matter which is the most difficult, delicate, and indefinite in the whole range of medical practice. It may well be that, as the result of past litigation, many doctors have refused, and will refuse, to take any part whatever in the work of certification because of the perils and anxieties of litigation which may follow. In suggesting that some further protective legislation is needed, the learned judge gave judicial confirmation to views expressed from time to time in these columns. The same views have been uttered in other places where the interests of the medical profession are by no means paramount—for instance, in the House of Lords during the debate upon Earl RUSSELL'S motion some months ago. The Lunacy Act machinery for the certification and detention of the insane was not devised or created to gratify doctors but to protect the public and to benefit the mentally afflicted. The machinery cannot be worked without the medical profession's assistance. If that assistance is to continue, safeguards must be furnished; and if the highest judicial tribunal will not positively state that these safeguards exist, Parliament must forthwith provide them.

THE METHODS OF BESREDKA.

FOR some years Prof. A. BESREDKA, of the Pasteur Institute, Paris, has been putting forward suggestions which are in definite opposition to current teaching about the nature of immunity. Following upon the work of METCHNIKOFF, PFEIFFER, BORDET, EHRLICH, and a veritable host of other investigators and teachers, two main theories have been developed—the cellular, whose parent was METCHNIKOFF, regarding resistance to infection as primarily the work of

the leucocytes and their ferments, and the humoral, begotten largely of the German school, emphasising the importance of the body fluids and the phenomenon of bacteriolysis. The battles of long ago resulted in an agreed peace, and the modern student has been brought up to believe that immunity is governed by both of these influences. But it must be admitted that our knowledge is incomplete and our explanations unsatisfactory; no worker in this field, if he has a critical sense, can feel complacent about their sufficiency. Part of the confusion may be due to the fact that immunological research has opened up so many paths for investigation, and has produced so many useful by-products in the way of clinical tests, that the main issue has been clouded in the complexities introduced by elaborate technique. It is the merit of more recent workers, and of BESREDKA in particular, that they have once again drawn attention to the main problem of the antagonism between the living body and the invading organism.

The earlier and more important of BESREDKA's theses is now generally known. The body defends itself, he considers, not so much by a general reaction common to many tissues, as by a local reaction in the tissue which is primarily the seat of disease and through which the organism normally gains entrance. This tissue, different in different diseases, he regards as both susceptible to invasion and capable of acquiring an immune state, a theory which has been mainly based on the phenomena of infection by anthrax, in which disease, it is held, it is essential that the skin shall first be invaded if infection is to occur. Experiments have been produced and multiplied which go to show that if anthrax bacilli be introduced into the body without infection of the skin the animal will survive their attack. Conversely no immunity results from infection which avoids the skin, whereas "solid" immunity can be given to animals—and even, apparently, to such susceptible creatures as the guinea-pig—if the virus is applied to the skin in such a way as to produce a mild local lesion. Such ideas present a point of view somewhat fashionable in France at the moment, finding an echo in LEVADITI'S contentions about the "neurotropic dermatoses," and their logical extension suggests that immunity to superficial and septic infections can be secured by dermal inoculation, whilst resistance to typhoidal and dysenteric disease is to be sought through local immunisation of the intestinal mucosa with vaccines given by the mouth. In connexion with this subject attention may be drawn to some extremely interesting observations made by D. B. BLACKLOCK and R. M. GORDON upon an allied phenomenon in metazoal infections, and recently described in our columns.[1] They found that in animals experimentally infected with larvæ of a fly, *Cordylobia anthropophaga*, which can penetrate and exist in the skin, giving rise to boils, a definite degree of immunity follows upon a first infection. This appears from their experiments to be an example of tissue immunity localised in the skin and most pronounced in the area in which the initial infection was produced, although diffusing to the rest of the epidermis. Our knowledge of immunity in metazoal infection is so fragmentary that this contribution deserves grateful attention. At the same time, as the authors state, there is some indirect evidence that the immune state, even if conferred by the skin, may be dependent upon the general metabolic exchanges, since grafts of skin from a susceptible individual eventually become immune when implanted in the body of a resistant animal.

[1] THE LANCET, April 30th, p. 923.

BESREDKA'S stimulating suggestions on immunity are not his only contribution to current thought, for he appears also as the ardent advocate of an entirely new method of bacterial therapeusis. He maintains that the cessation of growth in bacterial cultures is not due to any exhaustion of the pabulum available—as is generally supposed—but rather to the production of an "antivirus" inimical to the organisms' continued growth. This view, which fits in well with the experiments on which MARMOREK founded his belief in the unity of the streptococcal species, has suggested a possible means of treatment. In superficial infections, such as those caused by the pyogenic cocci, he recommends the use of dressings soaked in filtered cultures, and it is said that excellent results have been obtained. The opinions which we have here briefly summarised are expressed at length in a monograph on local immunisation, written by BESREDKA and recently translated into English.[2] In it the bacteriologist and the student of medicine in its broad aspect will find an abundance of novel ideas with a strong infusion of commonsense. He will also find much that is slipshod and uncritical, but this does not mean that the claims do not deserve careful examination and independent repetition, by which alone their worth can be decided.

SCIATIC PAIN.

AMONGST painful diseases sciatica occupies a foremost place, by reason of its prevalence, of its production by a great variety of conditions, of the great disablement it may produce, and of its tendency to relapse. These have led to its recognition as one of the great scourges of humanity. It was in these words that Prof. VITTORIO PUTTI introduced his new conceptions in the pathogenesis of sciatic pain when delivering the Lady Jones Lecture at Liverpool a few weeks ago.[3] This lecture appears at length in our present issue. Prof. PUTTI'S unparalleled experience at the Bologna Orthopædic Institute, of which he has charge, and his great reputation as a technician will ensure a respectful hearing for unfamiliar views. Continental writers, it has been recently remarked,[4] lay great stress on the association of spinal arthritis with sciatic neuritis; the occurrence of bony union between the transverse processes of the fifth lumbar vertebra and the sacrum, known abroad as sacralisation, has been credited with a great variety of painful affections of the lower limbs. Dr. HENRI DUFOUR, of the Hôpital Broussais, brought some of these cases last month before the Paris Medical Society of Hospitals[5]; in them there was not only fusion of the last lumbar vertebra with the sacrum, but the twelfth rib was missing, an observation which he would like others to note and confirm. Dr. DUFOUR is inclined to regard sacralisation as by no means a rarity, although it will be seen that Prof. PUTTI does not regard it as a frequent or potent cause of sciatica. The last lumbar vertebra is on the Bologna showing very liable to congenital variation; the foramen between it and the sacrum is the smallest of the series of openings transmitting spinal nerves; the vertebra itself is exposed more than any other to

[2] Local Immunization. By Prof. A. Besredka, Pasteur Institute, Paris. Edited and translated by Dr. Harry Plotz, Pasteur Institute, Paris. London: Baillière, Tindall and Cox. 1927. Pp. 181. 16s.

[3] THE LANCET, March 12th, p. 557.

[4] J. H. Anderson, Ibid., April 16th, p. 837.

[5] Bull. et Mém. de la Soc. Méd. des Hôpitaux, June 23rd, 1927, p. 922.

the sort of compression and strain which may set up arthritic processes. Herein, according to Prof. PUTTI, lies the explanation of the frequency of nervous involvement in this region. We are not aware of any extensive X ray examination of such cases in this country which would throw light on the Bologna findings, but marked changes have often been found on palpation of the muscular and fibrous tissue attached to the spine long before any bony change has become apparent on the X ray screen. In another region of the spinal column, Dr. HENRI FORESTIER, of Aix-les-Bains, recalls attention to the nodules and thickenings, frequently found in the neighbourhood of the cervical vertebræ in patients complaining of chronic headache and neuralgic pains, described many years ago by Prof. R. STOCKMAN, of Edinburgh. It should prove possible by some special method of screening to demonstrate changes such as these on the radiogram. Spondylitis, when clearly marked by bony change visible on the screen, is already a late stage in the condition. Whatever may be its earliest manifestation —and much more study of the subject is required before a definite opinion can be given—the work at the Bologna Institute is instructive in explaining how vertebral abnormality may cause pressure on nerves in the intervertebral foramina. But the question still remains, Is this pressure sufficient in itself to produce sciatica? Prof. PUTTI seems to hold that the congenital abnormality produces arthritis which in turn leads to sciatic pain, but he does not make it quite clear whether the congenital abnormality may be present without giving rise to arthritis. Clinicians in this country are familiar enough with cases of spinal arthritis in which the evidence of spondylitis is convincing but in which no pain is referred to the endings of the sciatic nerve. It seems likely that in addition to the congenital abnormality which Prof. PUTTI demonstrates so clearly there is a superadded factor of infection somewhere in the body, for there is evidence that removal of a chronic source of infection may cure sciatica even though the spinal arthritis persists. In recalcitrant cases, however, the publication of Prof. PUTTI's experience should certainly lead to a trial of the treatment which he recommends—namely, active hyperæmia with mobilisation of the lumbar spine.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION.—Dr. A. C. Roxburgh will give a special demonstration at the In-Patient Department of St. John's Hospital for Diseases of the Skin (262, Uxbridge-road, London, W. 14), on July 12th, at 2.30 P.M. On July 15th, at 5 P.M., Mr. G. Viner will give a lecture on Epiphora at the Royal Westminster Ophthalmic Hospital; and on the same date Mr. Archer Ryland will demonstrate at the Central London Throat, Nose and Ear Hospital at 10 A.M. Those desirous of attending this latter demonstration are asked to notify the hospital—Museum 1539. All these demonstrations are free to members of the medical profession. From July 11th to 16th the St. Mark's Hospital staff will undertake a special course occupying six afternoons and three mornings, and including lectures, operations, X ray and pathological demonstrations. Also beginning on July 11th is a two weeks' vacation course at the Prince of Wales's General Hospital, Tottenham, which will include instruction in medicine, surgery, and the specialties. The formal lectures at 4.30 P.M. are open to members of the Fellowship of Medicine. A four weeks' course in neurology at the West End Hospital started on July 4th, consisting of lecture-demonstrations at 5 P.M. daily. From July 13th to 30th a course in infectious fevers will be held at the Park Hospital, Hither Green, S.E. Instruction will be given on Wednesdays at 2.30 P.M., and on Saturdays at 11 A.M. Two special courses will take place in August—one on Diseases of Infants at the Infants Hospital, from August 8th to 20th, and one on Medicine, Surgery, and the Specialties, at the Queen Mary's Hospital, from August 29th to Sept. 10th. A general course of work, for which a separate programme is issued, is also provided by the Fellowship at the associated hospitals. Copies of all syllabuses and of the *Post-Graduate Medical Journal* are obtainable from the Fellowship of Medicine, 1, Wimpole-street, London, W.

Annotations.

"No quid nimis."

THE "CHEMIST AND DRUGGIST."

WE offer our congratulation to the *Chemist and Druggist* on the production of a special number (June 25th, 1927) which can be described as a triumph of trade journalism. Not even in the United States of America, where they do these things so well, do they produce anything better than this; and when we consider that this large volume—too large to be sent through the post—was delivered to its subscribers at almost the usual time on the ordinary day of publication, and this without impairing the up-to-dateness of its market news, we think the editorial staff, the printers and publishers have done something of which they can be justly proud. The *Chemist and Druggist* was, we believe, one of the first, if not the first, trade paper to be produced in this country; there were, of course, scientific and professional journals in being a considerable time before our Cannon-street contemporary issued its first number, as for instance (not to mention ourselves) the *Pharmaceutical Journal*, which at that time, if our recollection is right, was devoted almost entirely to the scientific side of pharmacy. To the *Chemist and Druggist*, however, belongs the honour of being a pioneer of trade journalism. We understand that this special number synchronises with the retirement from the editorial chair of Mr. S. W. Woolley, who has been editor of the *Chemist and Druggist* for some ten years; in this his final contribution to the chemists' library he has certainly left behind him a monument. Mr. Woolley has, we believe, for many years been a student of times past, and from time to time has given his readers the benefit of his searches in old book shops and libraries and museums both at home and in continental countries. Evidence of the patience and diligence with which he has pursued his hobby is to be found in some of the articles in his last special number. For instance, there is an historical sketch running to some 12 pages, the illustrations, as well of course as the text, in which will no doubt be preserved by every chemist who receives a copy of the paper. There are, for example, reproduced in colours four vellum leaves from the beautiful MS. prepared at Constantinople in 512 A.D. for Juliana Anicia, daughter of the Emperor Flavius Anicius Olybrius. Then, again, the Arabesque border on the first page of the article is from a page of the Galen MS. at Dresden. Indeed, the paper abounds with reproductions of priceless frontispieces: volumes in the Vatican Library, the British Museum, the National Library at Turin, and so on have been utilised by the block maker in a most skilful way. This is only to mention one section of the number; equally worthy of perusal are the illustrated article on the metal utensils used by the ancient druggists and the entertaining, not to say amusing, anecdotes about the quacks of old.

THE INHERITANCE FACTOR IN TUBERCULOSIS.

THE detailed schedules of over 4000 consecutive patients who first attended the tuberculosis institutions in the City of Belfast from 1914 to 1917 are the material from which Dr. Percy Stocks, inspired by Prof. Karl Pearson, has compiled a study[1] of the inheritance factor in tuberculosis. Dr. Stocks has deduced rates of active tuberculosis among brothers and sisters of those tuberculous patients by sex and age-groups; the ages of non-tuberculous brothers

[1] Fresh Evidence on the Inheritance Factor in Tuberculosis. By Percy Stocks, M.D., Medical Officer, Galton Laboratory, University of London. From Annals of Eugenics, vol. ii., Parts 1 and 2, April, 1927. Cambridge University Press.

and sisters were not always available, and for ages over 10 it was assumed that the proportionate age distribution of brothers and sisters was the same as that of the patients themselves. The next step was to estimate comparable rates for the general population in Belfast. Here, again, certain assumptions had to be made to fill in gaps in the data—e.g., that the ratio of deaths to active tuberculosis cases was the same in the whole of Belfast as in the dispensary population. From these rates it appears that tuberculosis of all forms was more prevalent among females than males in the ratio of about 3 to 2; the maximum prevalence in both sexes appeared to be at the school ages, but the fatality was much lower at this period than at any other. At ages under 20 in both sexes the prevalence of active tuberculosis among the living brothers and sisters of the patients was notably higher than in the general population. A more comprehensive estimate was then made by computing on a life-table basis the total numbers at any age, living or dead, who had been previously attacked, and whether the disease was active, latent, or cured. Again, the data were not complete and assumptions had to be made to estimate the numbers "surviving cured." The resulting smoothed curves showed that the total rate of onslaught was greatest in the first seven years of life in both sexes, and from 15–25 in females, and to a less extent from 20–30 in males. In the first of these periods the mortality curves do not show a corresponding steepness. Dr. Stocks estimated for every age the correlation between the incidence in pairs of brothers and sisters, obtaining at all ages after 10 a fraternal correlation of the order 0·25 to 0·3. During the first 10 years of life the association was higher.

As to the relative parts played by heredity and environment, the author lays more stress on the former than the latter, as he considers that if environment acted alone there would be a consistent tendency (which does not appear in the results) for these correlation to decrease regularly after 10 years of age. He points out, however, that the correlation in the first ten years of life is rather higher than would be expected from heredity alone, and suggests that this may be due either to direct infection among young children or a common source of infection, or possibly to the tendency for the tuberculosis officer to have all the brothers and sisters of a young tuberculous child examined, those of school age being more easily accessible than the older ones. It is hard to escape the feeling—and this is to the credit rather than the disparagement of the author—that if the reader begins with doubts he will end with doubts, and if he begins with certainties he will end with the same certainties.

INSULIN IN THE TREATMENT OF MALNUTRITION.

CERTAIN American observers have used insulin in marasmic infants and in debilitated and emaciated adults and those convalescent from various ailments with gratifying results. Recently, Prof. E. Trocello, of Rome, has described the results of 18 cases in a paper read at the Medical Congress at Padua last year, which has recently been published.[1] It should be recalled that Falta, of Vienna, in July, 1925, drew attention to the results obtained by insulin in three emaciated subjects in whom treatment by rest and superalimentation had failed. A rapid and enormous increase of weight occurred. The method adopted by Dr. Trocello is as follows. Every day, with the exception of Sunday, an injection of insulin is given one hour before lunch and dinner simultaneously with a drink containing 50 g. of sugar. The dose administered was 10 to 25 units in accordance with the tolerance of the patient, any hypoglycæmic disturbance being watched for. Out of the 18 young women treated the insulin was discontinued in four cases, one for hypoglycæmic disturbance, two owing to slight fever, and one on the development of tuberculosis. In the remaining 14 cases the results obtained were as follows. At the end of the treatment, which lasted about a month, there was an average gain of weight of 2·00 kg. A month after the termination of treatment an average increase of 2·07 kg. was maintained; in seven cases the increase had diminished, in seven it was intensified. Three months later the mean increase was 2·31 kg. In all cases the weight was above that observed before treatment. During the treatment in nearly all the cases the appetite became enormously increased; in the majority there was a sense of well-being and marked improvement in the neurasthenic symptoms, such as headache, giddiness, tachycardia, and constipation. After four months from the cessation of treatment seven cases were completely cured, marked improvement had taken place in two, some improvement in one, partial relapse occurred in two, and total relapse in one.

[1] Rassegna di Clinica, Terapia e Scienze Affini., xxvi., March–April, 1927.

THE PLAGUE PROBLEM IN SOUTH AFRICA.

PREVIOUS to 1899 there is no record of the occurrence of plague in the Union of South Africa, though it must have been frequently introduced from India it does not appear to have spread. During the South African War, however, plague found its way to the territory now incorporated in the Union from the Portuguese port of Lourenço Marques, and spread inland. In February, 1901, a plague epizoötic occurred in Cape Town docks where large stores of grain had accumulated, and since this time the disease has become endemic and given rise to considerable anxiety. These and other historical details are recorded in a recent publication of the South African Institute of Medical Research (No. XX., Vol. III., pp. 85–256) on the Plague Problem in South Africa by Dr. J. Alexander Mitchell, Secretary for Public Health and Chief Medical Health Officer for the Union of South Africa, Dr. J. H. Harvey Pirie, and Dr. A. Ingram, who are attached to the Institute respectively as pathologist and medical entomologist. During the years 1916–20 the sporadic prevalence of plague in the midland districts of the Cape, in localities where no direct contact with persons infected could be traced, puzzled the authorities. In 1920, from the study of all available information, it was found that the distribution of the outbreaks corresponded with areas or sandy stretches in which the gerbille (*Tatera lobengulæ*) was especially prevalent. Suspicion was therefore aroused that the multifarious rodent fauna of the veldt was acting as a reservoir of plague infection. Soon, in February, 1921, convincing proof was obtained in the death of a farmer near Bothaville, and in the vicinity an extensive plague epizoötic in the gerbilles and multimammate mice was thereby disclosed. Excavation of the burrows and the discovery of numbers of recently dead and dying mice left no doubt on this point. Subsequently more abundant proof was obtained and other rodents, such as the large-eared mouse, the striped mouse, and ground squirrel were found naturally infected. Public attention was riveted on this subject during the extensive epidemic of plague in the Orange Free State in 1923–24. The total number of cases was 329 with 204 deaths; all except six of these cases occurred on farms, and native herd boys were most frequently attacked. In most instances infection was traceable to veldt rodents and about 12 per cent. of cases were pneumonic in type. A virulent rodent epizoötic preceded and accompanied the epidemic. In some localities the carcasses of veldt rodents could be collected by the barrow-full, and it is estimated that 90 per cent. of these creatures had died. The larger rodents, such as the karoo-rat, spring hare, black rat, house mouse, and mongoose were also victims. Fortunately for the prevention of the spread of plague, the veldt rodents are such shy animals that they seldom travel by rail and that, with the exception of the multimammate mouse, they rarely enter the dwellings of man; evidence of the reimportation of plague

infection from the back veldt to Cape Town has so far been lacking. Another very fortunate circumstance is that the species of fleas infesting these veldt rodents are rarely found on the more domestic species or vice versa, so that infection does not travel from one to the other as readily as might have been expected. So far as is known, there has been no plague in domestic rodents in the Union since the Durban outbreak in 1912. Extensive research into the susceptibility of the veldt rodents to artificially inoculated plague has been carried out and showed that with the exception of one species (Namaqua gerbille) all succumb readily to the infection. The work has embraced extensive zoological studies of the ætiology of the veldt fauna as well as of their flea parasites by Dr. Ingram. Some useful practical information has emerged, such as the observation that the yellow mongoose and the suricate feed only on gerbilles when they are sick of the plague, so that the appearance of the fur of these animals in their excreta affords a valuable index of the prevalence of rodent plague in the district. The work has also resulted in the discovery of a hitherto unknown epizoötic disease in gerbilles locally known as the "Tiger River disease" due to a small Gram-positive bacillus—*Listerella hepatolytica*. Field experiments contributed by Dr. Pirie suggest that plague infection can only be kept alive in a scanty rodent population by flea transmission. The report is well illustrated by a coloured map of the Union showing the known distribution of rodent plague, as well as by a number of photographs of the various species of small mammals concerned.

OVARIAN GRAFTS.

STIMULATED by the good results obtained by Voronoff and others by means of testicular grafts obtained from the male monkey, Dr. Latis, gynæcologist to the Israelite Hospital at Alexandria, has applied the same method to the female taking his grafts from the female monkey. The patient, whose case he describes,[1] was 30 years of age and had suffered for some ten years from dementia præcox associated with signs of ovarian insufficiency. She had mental hallucinations with paroxysms of mania. The grafts were implanted on the surface of the ovaries themselves; the laparotomy which this course necessitated had the advantage of allowing an examination of the patient's own ovaries. These were found to be fibrotic and cystic. The operation was followed by the reappearance of the menses and by a marked diminution in the intensity of the patient's hallucinations, with corresponding improvement in her mental condition. There was also an increase in the size of the breasts. Dr. Latis adds to the description of his own case accounts of several operations carried out by other surgeons employing grafts either from a monkey or from other patients on whom an oöphorectomy had been performed. He mentions a patient of Mauclaire's in whom an ovarian graft was reported to have survived for a period of over eight years. He draws the conclusions that there exists a definite sphere of utility for ovarian grafts in gynæcological surgery, and states that good results may be obtained from the use of autografts, homo- or homeo-grafts, by the last named being meant grafts obtained from an allied species—namely, in the case of man, the higher ape.

Interesting though Dr. Latis's case undoubtedly is, we find his conclusions too optimistic. Many surgeons during the last decade have attempted to remedy ovarian deficiency by means of the implantation of human ovaries, and have failed to achieve any results. Blair Bell reports that he has failed to obtain any benefit from the use of homografts, although better success may follow the employment of an autograft. Even if improvement in the patient's condition be noted by the use of a homeograft it is probable that this is not due to vascularisation and survival of the implanted tissue, but to the absorption of a certain amount of internal secretion whilst it is breaking down. It is an unfortunate fact that the use of grafts in human beings gives far less favourable results than in the case of the lower animals. It is impossible to read the description of Steinach's experiments on guinea-pigs and rats without being deeply impressed, but when similar methods are employed in the human species the experiment usually turns out a failure. For some at present unknown reason the grafting of the more highly organised tissues on a human being is unsuccessful. Where apparent success is obtained it can generally be explained by the absorption of internal secretion during the process of degeneration of the graft.

[1] Bruxelles-Médical, June 5th, 1927.

INTERNATIONAL MEDICAL HYDROLOGY.

THE International Society of Medical Hydrology will hold its annual meeting in Rome from Wednesday, Oct. 12th, to Monday, Oct. 17th, under the hon. presidency of Sign. Mussolini, the President-Elect being Prof. Gabbi, of Parma. At the opening session in the University building Prof. Strasser, of Vienna, will open a discussion on the Uses of Water in Acute Disease, after which members will take part in the official opening of a new State bath establishment at Montecatini. Papers will be read on the Biological and Physical Properties of Medicinal Waters, on their Effect on Immunity, and on their Action on Ferments. The list of speakers includes Profs. Valenti, Marfori, and Chassevant, Drs. Mougeot, Ferreyrolles, and Burt, Messrs. Woodmansey and Race. Prof. Zörkendörfer will speak on the Processes of Change in Medicinal Waters, and Dr. Judd Lewis will bring forward proposals for International Standards of Analysis and Measurement. The Society is also invited to Salsomaggiore, and may have an opportunity of visiting the University of Parma. More than 100 names of members and their friends have been already inscribed for the tour, but the list is still open, and the Council will welcome the presence of medical non-members interested in the objects of the Society. Reduced fares and other privileges are offered to the party. Application should be made to the Hon. Sec., I.S.M.H., 139, Marylebone-road, London, W. 1.

ANTERIOR PARATHYROIDS.

SINCE the advances of surgery and of endocrinology combined to make operations on the thyroid a matter of common occurrence, it has become important for surgeons to know the exact anatomical position of the parathyroids. Their classical situation is on the posterior aspect of the thyroid lobes at the junction of the middle and upper third and in the lower third respectively. Several observers have recorded variations. They may be fewer or more than four, and small accessory fragments may lie scattered throughout a wide area. W. G. MacCallum [1] found inferior parathyroids at or below the lower pole, or even behind the trachea or in the thorax. E. H. Pool [2] found one on the front of the isthmus. In a recent issue of the *Canadian Medical Association Journal* [3] Mr. R. J. Millzner records the results of a careful search of all thyroids removed at the University of California Hospital. The parathyroids were usually found quite easily by following up the branches of the thyroid arteries, along one of which they almost invariably lie. They were recognised by their soft flabby consistency and yellowish or pinkish brown colour, as well as by the prominent artery entering the hilum. The percentage found rapidly increased with the development of skill in their detection, and at the peak it was manifest that parathyroid tissue was removed in 28 per cent. of all thyroidectomies. After that the technique was modified in order to reduce the percentage. Of those removed a very large number were on the anterior aspect of the lobe or isthmus, and the alteration in technique, which involved leaving the

[1] Brit. Med. Jour., 1906, ii., 1282.
[2] Ann. Surg., 1907, xlvi., 71.
[3] Can. Med. Assoc. Jour., April, 1927, xvii., 1053.

lateral part of the front of the capsule behind, saved about two-thirds of these. It is now the custom of the California Hospital to have the pieces of thyroid removed searched in the theatre; any parathyroid tissue discovered is implanted in the sternomastoid muscle by Lahey's technique at the conclusion of the operation. The author is uncertain whether these anterior parathyroids are accessory, or normally or atypically located parathyroids, or whether they were originally posterior and have been displaced. On the whole, he concludes that the anterior site is a normal variation and autopsy material has confirmed this. If approximately 10 per cent. of parathyroids lie in front of the thyroid gland while 30 per cent. lie on its lateral surface, it is clear that the recognition of the less common position is of primary importance for the operating surgeon.

"TENNIS LEG."

WE are not familiar with the term "tennis leg" in this country, but in America the term seems to be in current use as a name for a group of injuries which are characterised by more or less damage to the muscles, tendons, and aponeuroses forming the triceps cruris. Under it are also included injuries caused by violent strain of the plantaris. Such injuries and their successful treatment have been well known for many years. A noted case is that of the Edinburgh surgeon and anatomist, Alexander Monro primus, who died in 1767. In his Collected Works [1] will be found a description of his case and of the means which he successfully employed for its cure. A few years ago a distinguished Welsh surgeon suffered a similar injury and described his case and cure. Monro's injury was rupture of the whole of the tendon of Achilles, whereas "tennis leg" is usually a less complete and serious lesion, involving generally only some fibres of the soleus or gastrocnemius or the plantaris tendon. In a recent number of the *Medical Journal and Record*,[2] published in New York, Dr. F. Christopher advocates early mobilisation (with avoidance of violent exercise) in cases of this injury, and records good results. It is interesting to find that after a fortnight's fixation in full plantar flexion, Monro practised active movements and that he stated that his recovery was complete, which it had not been in all of the 16 other cases which he had seen. There can be little doubt, we think, of the benefits to be obtained by massage and heat and early or immediate gentle movement in the slighter cases of this not uncommon lesion. Dr. Christopher does not refer to the use of a high-heeled boot which has been very generally recommended during the early stages of treatment and which was used by Monro.

THE CAUSATIVE ORGANISM OF TRACHOMA.

Dr. Hideyo Noguchi has succeeded in isolating from the trachomatous conjunctiva of man an organism which produces follicles followed by scarring when injected beneath the conjunctiva of chimpanzees. The organism was recovered from the follicles and cultured, when it again produced the same results on inoculation. The announcement was made at the recent annual session of the American Medical Association, when the regular order of business was suspended for an address by Dr. Noguchi on the work he has recently been doing on the bacteriology of trachoma. The organism which he has isolated is a Gram-negative, aerobic bacillus, possessed of motility which may last 35 days in the special medium used for culture. Blood serum from trachoma cases produces marked agglutination of the cultured bacilli, which is not the case with serum from non-trachomatous cases. All Noguchi's bacteriological and experimental results have been verified by Verhoeff in Noguchi's laboratory, while de Schweinitz and Wilmer have expressed clinical agreement with them. The original inoculations were carried out by Noguchi in New Mexico among the Indians at the request of a committee of ophthalmic surgeons, appointed by the Secretary of the Interior, consisting of Drs. E. L. Posey, P. Knapp, W. H. Wilder, and Henry H. Proctor. Dr. Posey has recently given some account [3] of the incidence of trachoma among the Navajo tribe in the South-West States, and of the important activities of the United States Government to combat it. Dr. Proctor has also long been interested in trachoma among the Indians, and it is largely due to his influence that Noguchi left his work at the Rockefeller Institute to pay a scientific visit to New Mexico.

MEDICAL SCIENCE IN THE CITY OF YORK.

THOSE members of the medical profession who attended the services held last week in celebration of the 1300th anniversary of the Consecration of York Minster must have been assured of the falseness of that saying quoted by Sir Thomas Browne, "Ubi tres medici, duo athei." The long and intimate connexion of the City of York with medicine and surgery, the vastness of the Minster, the pomp and circumstance of the processions and of the services must have left a deep feeling of religious awe on the minds of all present. The seventh day of the celebrations was especially associated with the universities, colleges, and schools. It opened with a solemn Eucharist and procession followed by a midday service. The representatives of the various bodies robed in the neighbouring Church of St. Michael-le-Belfry and entered the Minster in procession through the great west door to the places allotted to them in the nave. The service was fully choral, and a sermon was preached by the Bishop of Manchester in the presence of a very large congregation. There were no representatives from the Royal College of Physicians of London, but the Royal College of Surgeons of England sent their President, Sir Berkeley Moynihan, and two members of the Council, Sir D'Arcy Power and Sir James Berry, to bear witness to the good work which the medical profession has always done in the City of York.

ACTIVITY AND HEALTH IN INDUSTRY.

THE relation between efficient activity and healthy contentment is passing from the realm of theoretical probability into that of ascertained fact. The progress made is reported to us annually by the Industrial Fatigue Research Board, to whose work the historian of the future will, we believe, accredit no little share in the decline of industrial discontent. The latest report [4] indicates the scope of matters under investigation, which include the use of rest pauses in spells of labour, and the value of rhythm in alternating rest and activity; accident causation and the part played by the personal factor, showing how the less efficient workers suffer more sickness and sustain more accidents than good workers; study of the influence of ventilation upon health and output; and the advantages accruing from vocational guidance. Special inquiries under industrial conditions are also afoot into sickness among cotton operatives and among printers, into load carrying, telegraphist's cramp, vision and illumination; others are proceeding in the laboratory into the laws of muscular exercise and the acquisition of skill. All these inquiries, whatever their objective, have one significant characteristic. The Board is satisfied that improvement of the conditions or methods of work for the worker means *ipso facto* an increase in his output, and accordingly the introduction of such methods can never be a matter of conflict between the interests of the employer and those of the worker; these are both

[1] The Works of Alexander Monro, M.D. Edin., 1781, p. 661 and plate vii.
[2] Early Mobilisation in Tennis Leg, by Frederick Christopher, M.D., F.A.C.S., of Winnetka, Ill., Med. Jour. and Record, June 1st, 1927, p. 731.
[3] Jour. Amer. Med. Assoc., May 21st.
[4] Seventh Annual Report of the Industrial Fatigue Research Board to Dec. 31st, 1926. H.M. Stationery Office. 1927.

affected in the same direction. In no other country is research on these lines being carried on so broadly or systematically, and British industry is slowly learning to appreciate the economic value of the work done and to benefit thereby.

INFANT WELFARE CONFERENCE.

ABOUT 700 delegates were appointed to the National Conference on Maternity and Infant Welfare, which began its sessions on July 5th. Sir Arthur Stanley, chairman of the Central Council for Infant and Child Welfare, took the chair at the opening of the proceedings and was supported on the platform by Mr. Neville Chamberlain (Minister of Health) and Mrs. Chamberlain, Lady Chatterjee (wife of the High Commissioner for India), medical representatives of the Ministry of Health and of the Scottish and Welsh Boards of Health, and many representatives of the voluntary and statutory bodies interested. As President of the conference Mr. Chamberlain delivered an address to a crowded meeting in the Great Hall of the British Medical Association. He expressed optimism about the probable results of recent legislation and hoped that Bills would become law during the present session for the registration of nursing homes and for making better provision for mentally defectives. The circulars recently issued by the Ministry for securing better notification and treatment for puerperal fever and pyrexia and more prompt attention for ophthalmia neonatorum had met with a good response from the local authorities. With regard to the former, steps were being taken to provide the help of specialists, skilled nursing, and hospital treatment. Mr. Chamberlain went on to refer to the maternal mortality-rate from childbirth and to the need for increased effort to reduce it. He enumerated many hopeful features. Orthopædic schemes had been inaugurated by 129 maternity and child welfare authorities, often in conjunction with voluntary associations. Antenatal work, with its hope both for mothers and babies, was gradually growing. Light treatment was becoming very popular; perhaps, indeed, too popular, for the results were not yet very certain and the dangers from imprudent and promiscuous treatment not small. The supervision of a medical expert and a specially trained nurse were essential. Another gratifying feature of the situation was the increase of trained midwives and health visitors in rural districts. One of the great needs was more attention and better supervision for the child between its first year and its entrance to school. Mr. Chamberlain welcomed these conferences as a sign of the invaluable triple partnership of the Ministry, the statutory health authorities, and the voluntary bodies. Each had something special to offer. The volunteers provided enthusiasm and the backing necessary for new measures, the statutory health authorities provided trained competence and continuity of policy, and the State provided a broader outlook and a wider experience.

THE British Medical Association starts its Edinburgh meeting next week. The annual representative meeting will begin on July 15th and the scientific sections, of which the provisional programme will be found on p. 82, will meet on July 20th, 21st, and 22nd. A centenary celebration, commemorative of the birth of Lord Lister, will be held under the presidency of the Earl of Balfour on Wednesday, July 20th, at 8 P.M., in the McEwan Hall, when addresses will be given by Sir W. Watson Cheyne, Prof. Tuffier, of Paris, Prof. Harvey Cushing, of Harvard, and Dr. James Stewart, of Halifax, Nova Scotia. A Lister memorial volume, to which Sir Edward Sharpey-Schafer, Mr. Alexander Miles, and Prof. John Fraser have contributed chapters, has been prepared under the editorship of Dr. A. Logan Turner. The quarterly meeting of the Royal Medico-Psychological Association will also take place in Edinburgh in the third week of July, the discussions being held jointly with the Section of Mental Diseases of the British Medical Association.

Modern Technique in Treatment.

A Series of Special Articles, contributed by invitation, on the Treatment of Medical and Surgical Conditions.

CCXXXI.

THE TREATMENT OF MALIGNANT DISEASE OF THE UTERUS.

II. OPERATIVE METHODS AND IRRADIATION.

Wertheim's Operation.

THE operation and, with a few negligible exceptions, the *only* operation worth performing for carcinoma of the cervix, is that introduced by the Viennese gynæcologist, Wertheim, in the early years of this century. Its inventor claimed that by its means about half of the patients who survived it remained well and free of recurrence five years afterwards. Wertheim's claims were fiercely criticised, firstly, on the grounds that his operation had an excessive operative mortality, and, secondly, that his surprising after-results were too good to be true, and even to the present day the operation is looked askance upon in many quarters, and in some countries, notably the United States, it has never fairly been put on trial.

The reason for this is that the operation, if carried out properly, is a very difficult one, and a surgeon taking it up must either learn from one already expert or educate himself, the latter alternative, of course, taking a long time. In the earlier days there was no such choice; surgeons had to educate themselves, with much pain and heavy anxiety, and it is not surprising that many of them, after a few disheartening failures, abandoned the procedure. Those, however, who by one route or the other will take the trouble to acquire the necessary experience and expertness, will find that the claims of the inventor were by no means exaggerated, but just the plain truth, and dependent neither on remarkable good luck nor extraordinary operative gifts. I took up the operation in 1907, and have continued to perform it ever since, and the results I have obtained absolutely substantiate Wertheim's claims. Whilst following the main lines laid down by its inventor, I have made it rather more extensive; thus, I remove the regional glands in every case, not merely when they are obviously enlarged, and I excise practically the whole vagina instead of merely the upper half. Like Wertheim, my earlier cases show a much higher operative mortality than my later ones, 20 per cent. against 12 per cent., but, as I have repeatedly pointed out, the figure of the operative death-rate chiefly depends upon whether or no the operator chooses to undertake very advanced cases, for amongst such the operative mortality is necessarily high. In my series are included a number of "last chance" cases; in fact, I have operated on over 60 per cent. of all the patients submitted to me. Last year I investigated the outcome of 214 radical abdominal operations performed by me between April, 1907, and October, 1921, and to show what can be done for those suffering from this cruel disease I cannot do better than summarise my results here:—

Of 340 unselected patients, 214 had the radical abdominal operation performed on them and 180 survived the operation (operation mortality, 15·8 per cent.).

Five years afterwards, of the 180 recovered patients, 85 were alive and well, 82 had died of recurrence, and 13 had been lost sight of or died of other disease.

Five years' freedom from recurrence was considered by Wertheim as an "absolute cure," but it is an unfortunate fact that 10 per cent. of all recurrences take place between the fifth and tenth years, after which a patient may be regarded as free of any further risk. Taking this into consideration, surgery's achievement in the operative cure of carcinoma of

the cervix may be thus expressed: that were it possible for a surgeon to perform a series of Wertheim's operations in one day instead of spreading them over a number of years, and keep in touch with all the survivors, nor lose any of them by other disease, he would find at the end of ten years that slightly more than one-half of those who had survived the operation had died of recurrence, whilst slightly less than one-half were permanently cured.

Radium and X Rays.

The results that I have obtained by operative treatment are so far superior to anything that in this country up to the present has been attained by irradiation, that I most strongly believe that whenever a growth is removable it should be removed. My experience of radium in the treatment of carcinoma of the cervix is now of long duration, as it has been used in quantity at the Middlesex Hospital for the last 17 years. The results obtained up to the last few years were most disappointing. In some cases a remarkable local disappearance of the growth occurred, and the patient became free of bleeding and discharge for many months or even a year or more; at the end of that time, however, the symptoms recurred, and the patient steadily went downhill and died. In other cases, the spread of the growth was very definitely checked, and the bleeding and discharge much lessened, though the growth remained grossly apparent to the examining finger. Such patients had radium applied at intervals over long periods, but, in spite of it, steadily lost ground, and, what was perhaps the more distressing feature, lost hope. Their lives were undoubtedly prolonged by the treatment, but the months or years gained could scarcely be called happy ones, beset as they were with alternating hope and fear, of which fear eventually predominated. In a few exceptional cases, a cure comparable to an operative cure—namely, freedom from any sign of the growth for over five years—was attained. Against these few complete successes and many partial successes had to be set an equally large number of patients in whom the radium stimulated the growth to increased activity, and materially shortened the lives of the patients by increasing their pain, bringing on foul discharge where none existed before, or producing fistulæ in the rectum or bladder. It must, however, be pointed out that all the patients of whom I am speaking were those in whom the growth was too advanced for operative removal; except in a few instances, radium has not been used in operable cases. Equally disappointing results have been recorded by many other writers.

Of recent years, however, much better results have been published by certain workers, chiefly on the continent and in America, and claims have been made to a percentage of cures nearly equal to the best of those claimed for surgery. The better results obtained are stated to be due to an improved technique in the using of radium, and this improved technique is now being used in England at various places, Middlesex Hospital included. It is too early to speak with confidence yet of the results which have been obtained by these new methods, but judging from cases that have come under my cognisance, I think that the results are better than they used to be. The point that concerns us at present, however, is whether radium should be used in preference to or as an alternative to operation in cases in which the growth is removable, and up to the present no figures published in this country justify such a change in policy. For cases too advanced for surgery, on the other hand, radium is the treatment of election, and superior in my opinion to deep X ray therapy. Even to-day with the improved technique the results obtained in these advanced cases are very unequal. In some great improvement is manifested, whilst in others the patients are made undoubtedly worse and their lives shortened. My experience of deep X ray therapy has been an unfortunate one, for I know of no case in which the growth permanently disappeared, and only a few in which material improvement was obtained. The drawback to X rays is that each application makes the patient so ill. X rays and radium may be used in combination.

Speaking generally of the results likely to be obtained by irradiation, I think it may be said that whilst they are better than they used to be, too much can easily be hoped from them at the present time. A perusal of the literature bearing on the subject shows a discordance of claims as marked in the case of individual workers as are the results in individual patients, and leaves an unbiased observer in a puzzled frame of mind.

Treatment of Carcinoma of the Body of the Uterus.

In the case of carcinoma of the body of the uterus, the only hope of cure lies in a radical operation. It is not necessary in this disease to subject the patient to an operation as severe as Wertheim's operation, because the route of spread of corporeal cancer is different from that of cervical disease, and occurs along tracts more easily compassed by the surgeon's knife. The common path of lymphatic permeation is along the lymphatics accompanying the ovarian vessels up to the glands along the upper half of the abdominal aorta. There is no tendency until very late for the growth to invade the lymphatics accompanying the uterine arteries to the side wall of the pelvis, and therefore there is no need for that wide excision of the paravaginal and paracervical tissue which is necessary in cervical cancer. Most patients with corporeal cancer actually die of metastatic deposits due to the growth penetrating the uterine wall, and entering into the peritoneal cavity, and this often occurs long before the cancer cells have reached the aortic glands. The operation indicated is a total hysterectomy, taking with the uterus the ovaries, tubes, and upper part of the broad ligaments as far outwards along the ovario-pelvic ligaments as possible. This is not a severe procedure in most cases, and the operative mortality is not a high one (about 5 per cent.), and would be lower still if it were not that many of the patients are elderly women, enfeebled by long-continued bleeding and foul discharge. As regards the chances of permanent cure, these are at least as good as those yielded by Wertheim's operation—that is to say, that about half the patients recovering from the operation are permanently cured.

Radium and X Ray Treatment in Corporeal Cancer.

Radium is practically useless in corporeal cancer. No doubt there are certain cases where the growth is quite superficial on the endometrium, in which radium introduced into the uterus would destroy permanently all the malignant cells, but we have no means of ascertaining the depth to which the growth has spread in the uterine wall, short of removing the uterus and examining it afterwards, and hence to use radium in preference to an operation, even where the growth is apparently a very recent development, would be wholly unjustifiable. Moreover, it is in these early growths that surgery can be certainly relied upon to give a permanent cure. Deep X ray therapy I have employed and seen employed in many cases, but I have not seen one in which the patient was cured, and very few in which duration of the patient's life appeared to be lengthened by its use. Whether it should be used as a means of comforting the patient and the patient's friends with the idea that something can be done is a moot point, for the treatment makes the patient feel very ill, and unless carried out in hospital is expensive.

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Special Articles.

THE FREEDOM RESEARCH FUND.

THE Freedom Research Fund was instituted in October, 1925, by the provision of a gift of £50,000 for the promotion of research work in connexion with the clinical laboratories of the London Hospital. Research workers were elected during the year 1926 and the following brief account indicates the lines along which research has been carried out during the first active year of the Fund. The work has been much assisted by the interest and coöperation of the honorary staff of the London Hospital and in particular by the daily intercourse which takes place between the laboratory workers and the staff of the medical unit.

Filterable Viruses.—During the year 1926–27 Dr. S. P. Bedson has been engaged on a study of the viruses of herpes, zoster, and chicken-pox with two main objects in view: (*a*) to throw light on the nature of filterable viruses in general, (*b*) to work out the inter-relationship of these three viruses with special reference to the supposed identity of the viruses of zoster and chicken-pox.

In the first of these two problems the virus of herpes has been employed and the results obtained, generally speaking, support the view that this virus is a particulate organised form of life. This work is being continued. Little advance has been made with the second and subsidiary problem owing to the failure of all efforts to transmit zoster and chicken-pox to laboratory animals. It has not, however, been abandoned. In addition, the opportunity has been taken of investigating other vesicular conditions such as dermatitis herpetiformis, hydroa gravidarum, and pemphigus.

Dr. Bedson has also investigated the rôle of the spleen in purpura. This work has been confined to an investigation of the normal mode of destruction of the platelet, and evidence has been adduced to show that this function is performed by the phagocytic cells of the spleen.

The Antigenic Properties of Serum Proteins.—Miss S. G. Robinson has commenced a study of the antigenic properties of purified serum proteins of different animal species, the object being to find out how far the antigenic behaviour of these lipoid-free proteins parallels their physical and chemical properties. At the same time she has been investigating the antigenic relationship of several Bence-Jones proteins isolated by Dr. L. F. Hewitt from cases of myelomatosis. Her work is not yet sufficiently advanced to warrant the drawing of any conclusions.

The Functional Capacity of the Lacteals.—Dr. H. W. Florey has been engaged on an investigation of the functional capacities of the lacteals of various animals. The rhythmical contractions observed in these vessels in guinea-pigs have been specially studied. In collaboration with Dr. P. Fildes, an examination has been made of the curative effects of massive intrathecal doses of antitoxin as compared with intravenous administration. The conclusion was arrived at that no advantage could be found, in rabbits, in the former method of giving antitoxin. With Dr. H. M. Marvin, observations are being made on the control of the cerebral circulation and the significance of the several factors involved.

Proteins of the Cerebro-spinal Fluid, Blood, and Urine.—Dr. Hewitt has worked out a method for the accurate determination of the total protein content and the amount of albumin and globulins in the cerebro-spinal fluid. A number of normal and pathological fluids were examined and characteristic alterations were found in certain conditions, especially in general paralysis of the insane. With Dr. Florey he is investigating the effect of various drugs on the protein content of the cerebro-spinal fluid.

Proteins of the blood, milk, eggs, &c., have been isolated by Dr. Hewitt in the pure state free from lipoids and characterised by their optical rotation and dispersion. The immunological relations of some of the proteins are receiving attention.

Albumin prepared from the urine of nephritic patients has been shown to have the same optical rotation and dispersion as serum albumin. Bence-Jones proteins from the urine of patients with myelomatosis are being investigated physico-chemically.

Osmotic Pressure.—In conjunction with Dr. J. R. Marrack the osmotic pressures of normal and nephritic sera and of isolated proteins are being measured under different conditions, in connexion with the study of the causes of œdema. The adsorption of various substances by proteins under various conditions is being studied. The occurrence of acetone bodies in the blood of diabetics is being followed (with Miss Brown).

MEDICINE AND THE LAW.

Mosquitoes as a Nuisance.

FURTHER information is now available to supplement the account given in this column on June 25th of the Scottish decision, believed to be the first of its kind, that, if a landowner leaves ditches in a stagnant condition, so that they become a breeding-ground for mosquitoes, to the annoyance of local residents, his action or neglect amounts to a nuisance within the Public Health (Scotland) Act, 1897.

The Section upon which the local authority of the county of Renfrew relied was Section 16, which contains a general definition of nuisances. The Section begins, "For the purposes of this Act," and then enumerates a list of matters which "shall be deemed to be a nuisance liable to be dealt with summarily in manner provided by this Act." The second group of items in the list consists of:—

> "Any street, pool, ditch, gutter, watercourse, sink, cistern, water-closet, earth-closet, privy, urinal, cess-pool, drain, dung-pit or ash-pit, so foul, or in such a state, or so situated, as to be a nuisance or injurious or dangerous to health."

The framework and most of the wording of the Section is founded upon the earlier provision of the English Act (Section 91 of the Public Health Act of 1875), but the English enactment is not quite so elaborate; it omits the words "street," "sink," "cistern," "water-closet," "earth-closet" and "dung-pit." The corresponding London provision (Section 2 of the 1891 Act) is as wide as the Scottish provision, except that it does not contain the words "street" and "sink." It will be noted, however, that the material words "pool, ditch, gutter, watercourse" are common to all three Acts.

The sheriff-substitute in the Paisley case found the following facts: the defender in the action was the proprietor in trust of certain lands at Muirend, Cathcart, comprising three ditches of which complaint was made; the ditches were close to a residential suburb of Glasgow; through the proprietor's neglect they had become so much encumbered with silt and vegetation that they were ineffective as water courses, and that the water which they should have conveyed had been largely thrown upon the adjacent ground; they thus became the breeding-ground of mosquitoes which, to some extent in the autumn of 1925, and to a large extent in the autumn of 1926, attacked people residing in the vicinity; the bites of the mosquitoes caused pain and swelling, and in some cases septic sores, and the presence of the mosquitoes caused reasonable apprehension and diminution of comfort in the community; finally, there was a reasonable probability of the repetition of these conditions in following years. The court proceeded to find, as a matter of law, that the ditches were watercourses in such a state and so situated as to be a nuisance, and injurious or dangerous to health within the

meaning of the statute, and that the proprietor of the land was the author of the nuisance. The latter was therefore ordered to clear the ditches and maintain them properly in future.

Numerous complaints of mosquito bites reached the public health department in Glasgow last autumn from the south-eastern side of the city where these lands are situated. The medical officer detailed to investigate the complaints found the bites to be of varying degrees of seriousness, according to the susceptibility of the patient. Some of the victims, especially elderly ladies, were confined to bed by their medical advisers. In some cases the swelling and redness which developed round the bites resulted in a blister which, when broken, became infected by septic organisms from the skin or clothing. The land on which the ditches stood was a tract of 15 acres known as Bogton Marsh. Presumably no legal consequences follow if such land is left neglected upon a moorland void of human habitation; but the spread of building outward from Glasgow evidently imposed a new obligation upon the landowner. The ground was low-lying, and, in periods of moderate flooding, the water overflowed and covered it continuously. Three types of mosquito are stated to have been found—*Anopheles bifurcatus, Culex pipiens*, and *Culicella morsitans;* the first and second of these bite readily both out-of-doors and indoors.

Legal Effect of Shock following Warning of Death.

The *Times* of June 21st reported a case in which an agreement was set aside on an unusual ground. The ground was that the agreement (for the sale of a partnership business) was entered into between two partners at a moment when one of the two was suffering from mental shock in consequence of his having just been told by a specialist that he was suffering from cancer of the stomach and that his death was imminent. It was not suggested that the shock made him insane, but it was contended that the shock of the warning benumbed his mind and made him incapable of bargaining in a matter of business with a man of normal health. After his death the Public Trustee (as his personal representative) applied to the Chancery Court of Lancaster to have the agreement set aside, and the court granted the application and ordered the agreement to be delivered up for cancellation. The agreement had related to the sale of the dying partner's share. The court considered that the share had not been properly valued and that the agreed price was less than the true value, the bargain being thus an improvident one from the point of view of the dying partner. The Vice-Chancellor expressed the opinion that there was a fiduciary relationship between the dying partner and the other partner who was a party to the agreement; this being so, the onus was upon the surviving partner to prove that the transaction was fair and righteous; in the opinion of the court he failed to discharge this onus. There was a conflict of evidence as to what was the effect of the specialist's warning, whether the dying man received it in a spirit of resignation or whether (as the specialist himself concluded) he was so acutely affected by shock that his judgment was overthrown. As already stated, the court took the latter view. It was proved in evidence that the dying man had always been obsessed by a fear of cancer; possibly therefore he was regarded as predisposed or particularly exposed to shock in this respect.

BIRKENHEAD JUBILEE APPEAL.—The Mayor of Birkenhead is anxious that the Jubilee of the Incorporation of the Borough should be marked by a determined effort on the part of all classes to put the leading charitable institutions in the town on a sound financial basis. The minimum sum of £20,000 is required to be divided amongst the Birkenhead General Hospital—which is celebrating its centenary next year—the Maternity Hospital, the Birkenhead and Wirral Children's Association, and the local Invalid Children's Association. Over £6000 has already been promised.

BRITISH MEDICAL ASSOCIATION: ANNUAL MEETING AT EDINBURGH.

PROGRAMME OF THE SCIENTIFIC SECTIONS.

THESE sections will meet from 10 A.M. to 1 P.M. for papers and discussions on Wednesday, Thursday, and Friday, July 20th, 21st, and 22nd. Some of the sections—notably Diseases of Children, Preventive Medicine, Physiology and Biochemistry, Tropical Diseases, Forensic Medicine, Tuberculosis, and Venereal Disease—have arranged for discussions or demonstrations to take place in the afternoons also.

The following Sections will meet on three days:—

Medicine.

President: Prof. G. Lovell Gulland. Vice-Presidents: Prof. J. Hill Abram, Dr. R. A. Fleming, Dr. H. Morley Fletcher, Dr. W. T. Ritchie. Hon. Secretaries: Dr. George Graham, Dr. G. D. Mathewson.

Provisional Programme.—July 20th.—Discussion: The Results of Insulin Therapy in Diabetes Mellitus. To be opened by Prof. Hugh MacLean; followed by Dr. George Graham and Prof. D. Murray Lyon.

July 21st.—Discussion: The Treatment of Acute Lobar Pneumonia. To be opened by Prof. John Hay; followed by Dr. H. Morley Fletcher and Dr. A. Fergus Hewat.

July 22nd.—Discussion: The Pathology and Treatment of Pernicious Anæmia. To be opened by Prof. G. Lovell Gulland; followed by Dr. A. F. Hurst.

Surgery.

President: Prof. D. P. D. Wilkie. Vice-Presidents: J. W. Dowden, Mr. F. J. Steward, Mr. J. W. Struthers, Mr. H. Wade, Mr. A. M. Webber. Hon. Secretaries: Mr. J. M. Graham, Mr. E. C. Hughes.

Provisional Programme.—July 20th.—Discussion: Tuberculosis of the Kidney. To be opened by Sir John Thomson-Walker; followed by Dr. A. Rollier (Leysin), Prof. A. Fullerton, Mr. H. Wade, Mr. J. F. Dobson, and Mr. B. J. Ward.

Paper: Mr. W. Rankin: The Treatment of Acute Osteomyelitis by Primary Diaphysectomy.

July 21st.—Discussion: The Place of Surgery in the Treatment of Toxic Goitre. To be opened by Mr. T. P. Dunhill; followed by Prof. G. R. Murray, Mr. C. Thurstan Holland, Prof. R. E. Kelly, and Dr. John Eason.

Paper: Sir Almroth E. Wright: The Rational Treatment of Infected Wounds.

July 22nd.—Discussion: Chronic Appendicitis. To be opened by Mr. Wilfred Trotter; followed by Mr. J. W. Dowden, Mr. Victor Bonney, Mr. A. J. Walton, and Mr. H. J. Paterson.

Paper: Mr. A. MacLennan: Burns.

Obstetrics and Gynæcology.

President: Dr. James Haig Ferguson. Vice-Presidents: Mr. T. Watts Eden, Dr. Gibbon FitzGibbon, Dr. W. Fordyce, Prof. R. W. Johnstone, Mrs. E. Vaughan-Sawyer. Hon. Secretaries: Dr. Daniel Dougal, Dr W. F. T. Haultain.

Provisional Programme.—July 20th.—Discussion: The Relation of Pregnancy to General Diseases. To be opened by Prof. J. M. Munro Kerr (Cardiac Diseases), Dr. E. Rist, of Paris (Tuberculosis), and Prof. F. J. Browne (Venereal Diseases); followed by Dr. G. FitzGibbon and Dr. Mary H. J. MacNicol.

July 21st.—Discussion: The Hygiene of Menstruation in Adolescents. To be opened by Prof. R. W. Johnstone, Dr. J. H. P. Paton, and Mrs. A. E. Sanderson Clow; followed by Mrs. E. Vaughan-Sawyer.

July 22nd.—Papers: Dr. F. A. E. Crew: The Effect upon the Sex Ratio of Conception Early and Late in Relation to the Œstrous Cycle of the Rat. Dr. D. A. Miller: Failed Forceps Cases. Dr. D. Dougal: The Clinical Features of Ectopic Pregnancy. Dr. B. Solomons: Some Points in the Technique of the Low Segment Cæsarean Operation. Prof. W. Fletcher Shaw: Uterine Fibroids after the Menopause.

Pathology and Bacteriology.

President: Prof. J. Lorrain Smith, F.R.S. Vice-Presidents: Dr. W. R. Logan, Prof. T. J. Mackie, Dr. H. D. Wright. Hon. Secretaries: Dr. James Davidson, Dr. H. J. Parish.

Provisional Programme.—July 20th.—Discussion: Growth in its Pathological Relations. To be opened by Dr. A. Leitch; followed by Prof. R. Muir, Dr. G. W. de P. Nicholson, Prof. J. Shaw Dunn, Prof. M. J. Stewart, and Prof. E. H. Kettle.

July 21st.—(Joint meeting with Section of Comparative Medicine). Discussion: Immunity. To be opened by Dr. R. A. O'Brien and Prof. C. H. Browning; followed by

Prof. R. Muir, Dr. H. D. Wright, Colonel W. F. Harvey, and Prof. T. J. Mackie.

July 22nd.—(Joint meeting with Section of Comparative Medicine). Discussion: Aspects and Problems of Comparative Medicine. To be opened by Prof. Basil Buxton; followed by Major G. W. Dunkin, Mr. W. H. Andrews, Dr. F. A. E. Crew, Dr. H. H. Scott, Prof. R. T. Leiper, Mr. J. W. Brittlebank, Mr. A. Goften, Mr. T. W. M. Cameron, and Mr. J. McAllan.

Therapeutics and Pharmacology.

President: Prof. J. A. Gunn. Vice-Presidents: Prof. A. J. Clark, Prof. F. R. Fraser, Dr. E. P. Poulton. Hon. Secretaries: Dr. E. G. Holmes, Dr. C. G. Lambie.

Provisional Programme.—July 20th.—10 A.M., Discussion: Clinical Methods of Administration and Therapeutic Uses of Oxygen. To be opened by Dr. E. P. Poulton; followed by Dr. H. Whitridge Davies and Dr. W. T. Ritchie. 12 noon, Paper: Prof. J. A. Gunn: Expectorants.

July 21st.—Discussion: The Therapeutic Uses of Calcium Salts. To be opened by Prof. F. R. Fraser; followed by Dr. L. G. Parsons Mr. C. P. Stewart (Biochemical Aspect), Dr. G. H. Percival (Pharmacological and Therapeutic Aspect), Prof. L. Blum (Strasbourg), Dr. G. C. Linder (Tetany), and Dr. N. F. C. Burgess.

July 22nd.—Discussion: The Action and Uses of Ovarian Extracts. To be opened by Prof. W. E. Dixon; followed by Dr. K. A. Coward (Standardisation), Mr. A. S. Parkes (Physiological), Dr. W. R. Addis (Clinical), and Prof. J. M. Munro Kerr (Gynæcological).

Diseases of Children.

President: Prof. John Fraser. Vice-Presidents: Dr. H. C. Cameron, Dr. A. D. Fordyce, Dr. Charles McNeil. Hon. Secs: Dr. Helen M. M. Mackay, Dr. Lewis Thatcher.

Provisional Programme.—July 20th.—Discussion: Acute Pneumonia in Early Childhood. To be opened by Dr. Charles McNeil and Dr. Agnes R. Macgregor conjointly; followed by Prof. Leonard Findlay, Dr. J. H. Thursfield, Colonel W. Glen Liston, and Dr. N. S. Carmichael. Afternoon, Demonstration: Dr. W. A. Alexander: Acute Pulmonary Conditions in Childhood, illustrated by specimens, X ray prints, large sections, and microscopic preparations Surgical demonstration at Royal Edinburgh Hospital for Sick Children.

July 21st.—Discussion: Acute Intestinal Obstruction in Infancy and Childhood. To be opened by Mr. Alex. MacLennan; followed by Mr. L. E. Barrington-Ward, Miss G. M. A. Herzfeld, Mr. F. C. Pybus, and Mr. Norman M. Dott. Afternoon, Demonstration of Medical Cases at Royal Edinburgh Hospital for Sick Children.

July 22nd.—Discussion: Therapeutic Modification of the Diet in Infancy: What can be Achieved by it? To be opened by Dr. H. C. Cameron; followed by Dr. A. D. Fordyce, Dr. G. B. Fleming, and Dr. Lewis Thatcher.

Mental Diseases.

President: Prof. G. M. Robertson. Vice-Presidents: Dr. Bernard Hart, Dr. John Keay, Colonel J. R. Lord, Dr. H. C. Marr. Hon. Secretaries: Dr. R. D. Gillespie, Dr. W. M. McAlister.

Provisional Programme.—July 20th.—Discussion: Chronic Sepsis as a Cause of Mental Disorder. To be opened by Dr. William Hunter; followed by Sir Berkeley Moynihan, Dr. D. Chalmers Watson, Dr. E. Goodall, Dr. C. H. Bond, and Dr. W. F. Menzies.

July 21st.—(Joint meeting with the Section of Neurology.) Discussion: Epidemic Encephalitis. To be opened by Dr. Ivy Mackenzie (Epidemiological Considerations), Dr. J. G. Greenfield (Pathology), Dr. R. M. Marshall (Mental Aspects), and Dr. G. Riddoch (Chronic Encephalitis); followed by Dr. E. Mapother, Dr. H. Devine, Dr. W. J. Adie, and Dr. W. A. Potts.

July 22nd.—Discussion: Points in the Lunacy Commission (England) Report—(*a*) Are the existing safeguards against wrongful detention adequate? (*b*) How far is judicial intervention necessary in the process of certification? (*c*) What additional facilities are required for early treatment? To be opened by Prof. G. M. Robertson.

The following Sections will meet on two days:—

Neurology.

President: Prof. Edwin Bramwell. Vice-Presidents: Dr. A. Ninian Bruce, Dr. J. G. Greenfield, Dr. F. M. R. Walshe. Hon. Secretaries: Dr. E. A. Carmichael, Mr. N. M. Dott.

Provisional Programme.—July 20th.—Discussion: The Tics and Allied Conditions. To be opened by Dr. S. A. Kinnier Wilson; followed by Prof. Guillain (Paris), Dr. A. F. Hurst, Dr. A. Stanley Barnes, Dr. T. Grainger Stewart, Dr. D. E. Core, Dr. R. G. Gordon, and Dr. W. J. Adie.

July 21st.—Joint meeting with Section of Mental Diseases. (See above.)

Ophthalmology.

President: Mr. A. H. H. Sinclair. Vice-Presidents: Mr. Wilfred Allport, Sir Arnold Lawson, Mr. H. M. Traquair. Hon. Secretaries: Mr. R. E. Bickerton, Mr. E. H. Cameron.

Provisional Programme.—July 20th.—Discussion: Optic Neuritis. To be opened by Dr. J. V. Paterson; followed by Dr. Henning Rönne (Copenhagen) and Dr. A. J. Ballantyne.

July 21st.—Papers: Miss I. C. Mann: Some Aspects of the Comparative Development of the Retina. Sir W. T. Lister: Some Points in Connexion with Detachment of the Retina. Mr. W. Clark Souter: Spontaneous Reattachment of Detached Retina. Sir Arnold Lawson: Value of Antiseptics in Modern Ophthalmic Surgery. Mr. F. Holt Diggle: Relationship between Lacrymal Obstruction and Nasal Disease. Mr. H. M. Traquair: Incidence of Tobacco Amblyopia in Edinburgh and District. Mr. A. H. H. Sinclair: Remarks on Intracapsular Extraction of Cataract, and Demonstration.

Laryngology and Otology.

President: Mr. A. Logan Turner. Vice-Presidents: Mr. J. S. Fraser, Mr. W. M. Mollison, Dr. Donald R. Paterson. Hon. Secretaries: Mr. A. R. Dingley, Mr. W. T. Gardiner.

Provisional Programme.—July 20th.—Discussion: Neurological and Mechanical Factors underlying Immobility of the Vocal Cords; their Diagnosis, Prognosis, and Principles of Treatment. It will be opened by Dr. A. Brown Kelly (Neurological Aspect) and Mr. Herbert Tilley (Mechanical Side).

July 21st.—Discussion: Otosclerosis. To be opened by Mr. G. J. Jenkins; followed by Prof. F. R. Nager (Zurich) and Dr. A. A. Gray.

Papers: Mr. Norman Patterson: Some Diseases Affecting the Thyro-glossal Tract. Dr. Stephen Young: Radiography in Mastoid Disease.

Preventive Medicine.

President: Prof. P. S. Lelean. Vice-Presidents: Dr. G. F. Buchan, Miss Harriette Chick, Dr. A. M. Hewat, Dr. G. R. Leighton. Hon. Secretaries: Dr. W. T. Benson, Dr. C. W. Hutt.

Provisional Programme.—July 20th.—Discussion: Should all Public Health Administration—Municipal, School, Factory, &c.—be Concentrated under a Single Department, and the Immediate Control in Each Executive Area be Vested in a Single Individual? To be opened by Dr. A. S. M. MacGregor; followed by Dr. F. E. Wynne, Dr. J. H. Meikle, Prof. E. L. Collis, and Dr. E. W. Hope.

July 21st.—10 A.M., Discussion: What Duties has the State in Relation to the Nation's Food-supply regarding Research, Instruction of Parents, Maintenance of Supplies, and Cooking Facilities? To be opened by Prof. E. Mellanby, followed by Dr. Eustace Hill, Dr. J. P. Kinloch, and Mr. G. Benzie. 12 noon, Paper: Pulmonary Asbestosis, by Dr. W. E. Cooke, Sir Thomas Oliver, and Prof. Stuart McDonald.

Physiology and Biochemistry.

President: Prof. Sir Edward Sharpey-Schafer, F.R.S. Vice-Presidents: Prof. P. T. Herring, Prof. D. Murray Lyon, Prof. John Mellanby, Prof. T. H. Milroy, Prof. John Tait (Montreal). Hon. Secretaries: Prof. B. A. McSwiney, Miss Laurie Walker.

Provisional Programme.—July 21st.—Morning session. Discussion: The Structure and Function of the Spleen. To be opened by Prof. John Tait; followed by Prof. J. Barcroft, F.R.S., and others. Papers: Prof. P. T. Herring: The Pineal Gland. Prof. D. Murray Lyon and Mr. W. Robson: Cystinuria. Dr. J. Crighton Bramwell: Form of the Pulse Wave. Prof. J. A. MacWilliam and Prof. G. Spencer Melvin: Optimal Rhythm in the Mammalian Heart and the Action of the Cardiac Nerves. Dr. C. Reid: The Mechanism of Voluntary Muscular Fatigue. Prof. H. E. Roaf: The Quantitative Measurement of Defects in Colour Vision. Prof. B. A. McSwiney: Structure and Movements of the Cardia. Afternoon session. Discussion: The Influence of Internal Secretions on Sex Characters. To be opened by Dr. F. A. E. Crew; followed by Mr. A. S. Parkes, Prof. E. E. Glynn, and others.

July 22nd.—Morning session. Discussion: Chemical Changes accompanying Muscular Activity. To be opened by Prof. T. H. Milroy; followed by Sir F. Gowland Hopkins, Prof. O. Meyerhof (Berlin), and Prof. G. Embden (Frankfürt). Papers: Prof. J. Mellanby: Bile as the Alimentary Stimulus for Pancreatic Secretion. Prof. J. Tait: Natural Arrest of Hæmorrhage from a Wound (illustrated with lantern slides). Dr. H. Whitridge Davies and Prof. B. A. McSwiney: Circulation Rate. Prof. R. J. S. McDowall: Physiological Considerations in High Blood Pressure. Dr. C. R. Harington: The Constitution of Thyroxin.

Afternoon session. Discussion: Hæmolysis. To be opened by Dr. E. H. Ponder; followed by Prof. J. Mellanby, Dr. R. Brinkman (Groningen), and others.

Comparative Medicine.

President: Principal O. Charnock Bradley. Vice-Presidents: Prof. J. B. Buxton, Dr. F. A. E. Crew, Major G. W. Dunkin. Hon. Secretaries: Mr. T. W. M. Cameron, Mr. J. Russell Grieg.

Provisional Programme.—July 21st and 22nd.—Joint meeting with Section of Pathology and Bacteriology. (See above.)

The following Sections will meet on one day:—

Dermatology.

President: Dr. R. Cranston Low. Vice-Presidents: Dr. W. Herbert Brown, Dr. H. D. Haldin-Davis. Hon. Secretaries: Dr. Robert Aitken, Dr. F. D. Howitt.

Provisional Programme.—July 21st.—Discussion: The Uses and Limitations of Ultra-Violet Radiations in Dermatology. To be opened by Dr. S. E. Dore.

Papers: Dr. H. C. G. Semon: The Value of Krysolgan in Lupus Erythematosus. Dr. G. B. Dowling: The Treatment of Tinea Capitis with Thallium Acetate.

Tropical Diseases.

President: Dr. Andrew Balfour. Vice-Presidents: Lieut.-Colonel E. D. W. Greig, Lieut.-Colonel W. F. Harvey, Lieut.-Colonel W. Glen Liston, Lieut.-Colonel W. P. MacArthur. Hon. Secretaries: Dr. A. R. D. Adams, Dr. J. F. C. Haslam.

Provisional Programme.—July 20th.—10 A.M. Discussions: (1) Amœbic Dysentery. To be opened by Prof. Warrington Yorke; followed by Dr. P. H. Manson-Bahr (Treatment and Epidiascopic Illustrations of Sigmoidoscope Appearances), Dr. J. Gordon Thomson, and Dr. N. Swellengrebel (Amsterdam). 11 A.M. (2) Some Problems of Malaria Prophylaxis. To be opened by Lieut.-Colonel S. P. James; followed by Sir William Prout, Lieut.-Colonel E. D. W. Greig, Dr. L. W. Hackett (Rome), and Dr. N. Swellengrebel.

Forensic Medicine.

President: Prof. H. Harvey Littlejohn. Vice-Presidents: Earl Russell, Sir Walter Schroder, Prof. Sydney A. Smith (Cairo). Hon. Secretaries: Dr. D. J. A. Kerr, Prof. J. E. W. McFall.

Provisional Programme.—July 21st.—Discussions: (1) Alcohol and the Motorist. To be opened by Dr. G. Carter. (2) The Teaching of Forensic Medicine. To be opened by Prof. J. Glaister.

Tuberculosis.

President: Dr. S. Vere Pearson. Vice-Presidents: Dr. William Brand, Dr. A. de W. Snowden, Dr. Ernest Watt. Hon. Secretaries: Dr. J. C. Simpson, Dr. R. R. Trail.

Provisional Programme.—July 22nd.—10 A.M. Discussions: (1) Radiology and Diagnosis of Intrathoracic Tuberculosis from the Point of View of Specialist and Practitioner. To be opened by Mr. H. Morriston Davies; followed by Dr. E. Rist (Paris), Dr. J. Logan Stewart, and Dr. J. M. Woodburn Morison. (2) Pathology of the Tuberculosis of Childhood and its Bearing on Clinical Work. To be opened by Prof. Eugene L. Opie (Washington University); followed by Dr. R. G. Canti and Dr. P. F. Armand-Delille (Paris). (3) Interrelation of Physician and Surgeon in Regard to Non-pulmonary Tuberculosis. To be opened by Dr. D. A. Powell and Prof. John Fraser; followed by Dr. G. H. Girdlestone.

Venereal Diseases.

President: Mr. David Lees. Vice-Presidents: Dr. Archibald Cambell, Mrs. Margaret Rorke, Mr. R. Stopford. Hon. Secretaries: Dr. F. C. Doble, Miss M. Forbes Liston.

Provisional Programme.—July 22nd.—Morning session. Discussion: The Value of Routine Examination of the Cerebro-spinal Fluid with regard to (*a*) More Accurate Knowledge, (*b*) Prognosis, (*c*) Treatment. To be opened by Mr. C. H. Mills. Clinical cases illustrating types of neurosyphilis will also be shown. Afternoon session. Discussions: (1) The Employment of Certain Constituents of the Gonococcus in Treatment and of other Constituents in Tests of Cure. To be opened by Major E. C. Lambkin. (2) The Place of Bismuth in the Treatment of Syphilis, by Mr. David Lees.

Radiology.

President: Dr. J. M. Woodburn Morison. Vice-Presidents: Mr. M. R. J. Hayes, Dr. R. E. Roberts. Hon. Secretaries: Dr. W. Crichton Fothergill, Dr. John Muir.

Provisional Programme.—July 20th.—Discussions: (1) 10 A.M. X Rays in the Diagnosis of Intrathoracic Growth. To be opened by Dr. Stanley Melville; followed by Mr. C. Thurstan Holland, Dr. A. Fergus Hewat, and Dr. D. Campbell Suttie. (2) 11.30 A.M. X Rays and Radium in the Treatment of Carcinoma of the Breast. To be opened by Dr. N. S. Finzi; followed by Dr. J. H. D. Webster, Dr. A. E. Barclay, Mr. M. R. J. Hayes, and Dr. R. Knox.

History of Medicine.

President: Dr. John D. Comrie. Vice-Presidents: Dr. Arnold Chaplin, Dr. Charles Singer, Dr. R. W. Innes Smith, Mr. Henry S. Wellcome. Hon. Secretaries: Dr. W. J. Dilling, Dr. A. Cairns White.

Provisional Programme.—July 22nd.—10 A.M. Discussion: The Historic Evolution of Disease. To be opened by Sir Humphry Rolleston; followed by Prof. G. Elliot Smith (Ancient Prototypes of Modern Disease), Dr. G. M. Cullen (World Epidemics and their Relationship in Cause and Effect to Social Conditions), and Miss M. C. Buer (The Effect of Early Industrialism upon the Health of the Community).

Papers: 12.15 P.M. Prof. A. J. Clark: The Historical Aspect of Quackery. 12.30 P.M. Prof. W. J. Dilling: The Methods of Introduction of Drugs.

Medical Sociology.

President: Dr. F. N. Kay Menzies. Vice-Presidents: Dr. L. D. Cruickshank, Sir Henry S. Keith, Lord Mackenzie, Sir Arthur Stanley, Sir Norman Walker. Hon. Secretaries: Dr. T. Yule Finlay, Mr. B. S. Simmonds.

Provisional Programme.—July 22nd.—Discussion: The Future Relationship of Municipalities to the Voluntary Hospitals of this Country. To be opened by Mr. H. L. Eason and Mr. M. A. Reynard; followed by Sir Henry Keith, Sir Arthur Stanley, and others.

THE PRACTICE OF DENTISTRY IN THE IRISH FREE STATE.

(FROM OUR DUBLIN CORRESPONDENT.)

THE Minister for Industry and Commerce has introduced to the new Dail the same Bill to provide for the registration of dentists as was introduced to the last Dail in May, though it was not then proceeded with. It is likely that the several stages of the Bill will be taken rapidly, as the Government hopes for an early adjournment of the Oireachtas. The Bill is framed in order to validate an agreement between the Governments of Great Britain, of the Irish Free State, and of Northern Ireland. It provides for the establishment of a Dental Board which is to control a Register of Dentists. All persons at present on the General Dentists' Register and all persons who in the future are in possession of a degree or licence in dental surgery, granted by a university or college in the Irish Free State having power to grant the same, are entitled to be registered. The Board is empowered to investigate complaints of infamous or disgraceful conduct in a professional respect, and if in its opinion the complaints are justified, to send a report to the Medical Council. The Medical Council, on consideration of such report and after giving an opportunity of being heard to the person affected, may direct the Board to erase the name of such person from the Register. All such decisions are subject to appeal to the High Court. The supervision of education is entrusted, not to the Dental Board, but to the Medical Council. The scheme as a whole seems to be satisfactory, but two sections call for criticism. In Section 3 (3), dealing with the constitution of the Dental Board, it is provided that one member is to be elected by persons registered under Section 3 of the Dentists Act, 1921, while four are to be elected by those who are registered otherwise than under that section. It is a matter of question whether it is wise to perpetuate this grouping of the members of the dental profession. But it is clear that, if this separate representation is to be set up, it should be for a time only. The persons registered under Section 3 of the Act of 1921 are a vanishing quantity, but, as the Bill stands, as long as any of them remain they will be entitled to separate representation on the Dental Board. A period of 10 or 15 years would be adequate for this special provision, if indeed the provision is necessary at all. The other point for criticism is more important to the medical profession. Section 41 proposes to render it a punishable offence for any person, who is not registered, to practise dentistry. This is subject

to the following qualifications as regards medical men :—

Subsection (2). The provisions of the foregoing subsection shall not operate to prohibit—

(*a*) the practice of dentistry or dental surgery by a registered medical practitioner who is at the date of the passing of this Act a registered medical practitioner, or

(*b*) the performance of any surgical operation in connexion with the tissues of the mouth or jaws, or the giving of any dental treatment, advice or attendance in urgent dental cases by any registered medical practitioner.

It will be seen that the Bill proposes, in effect, to make dentistry in future a separate profession instead of regarding it, as hitherto, as a branch of surgery. It may be assumed that the universities and medical corporations will make representations to prevent the limitation proposed to be put to the functions of the medical profession. As the section stands, it appears that it depends on the interpretation of the significance of a comma whether in the future a surgeon may operate on the mouth or not, except in case of urgency.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Certified Milk.

THE report of the Scottish Board of Health, noticed in your columns last week, shows in detail the progress of the movement towards the popularisation of a higher grade milk. The response to official initiative in this campaign was at first given only by a few enthusiastic pioneers in production. Now the commercial demand is stiffening everywhere, and is demonstrated in the efforts of certain tradesmen to get the "Grade A" price for a lower grade article. The production of higher grade milk is going through the usual phases: from not needed, not wanted, not practicable, not a "paying proposition," to wanted, practicable, and paying. It is now a common experience of the child welfare centres to find even the less well-off mothers inquiring as to Certified and Grade A milk for their babies, who must have the best. The producers are now active on a large scale. At a crowded meeting of producers of Certified milk and Grade A (tuberculin-tested) milk, held in Glasgow recently, it was decided to form a society to promote the sale of such milk in Scotland. The society will be called Scottish Certified and Grade A (T.T.) Milk Producers, Ltd., and a whole-time secretary will be appointed. The expense of purveying these higher grades of milk is still out of all proportion to the small demand, and the object of the new society is to stimulate and create a better market. In some cases, where herds had been cleared of tubercle, milk of the highest grades had to be converted into cheese or fed to calves and pigs. This is not creditable to our social sense. But the omens are favourable. Paisley Corporation has contracted for Certified milk for their hospitals. Glasgow Corporation has contracted for Grade A (T.T.) milk, and it is said that the Edinburgh hospitals and infirmaries are moving in the same direction. When the pressure of the new Dairies Act begins to be felt, the whole movement will show a substantial acceleration.

The Royal Edinburgh Hospital for Sick Children.

The annual report shows that this hospital is maintaining its place worthily among the first-class Scottish hospitals. Indoor cases treated in 1926 were: medical, 1593; surgical, 1248; against 1642 and 1213 in 1925. The average residence was 17 days, and 1106 operations were performed. Other figures given are: out-patients (new), medical, 2361, with 6479 re-attendances; surgical, 3263, with 13,452 re-attendances; vaccinations, 49; total, 25,604, against 25,958 in 1925. Artificial sunlight is in active use, and is available for out- as well as for in-patients. The report says: "The benefit in selected cases is unquestionable, and there was no difficulty in getting parents to bring their children regularly for the considerable number of exposures that were necessary." The tuberculosis cases admitted to the wards "showed no decrease from the average for the years immediately preceding the war. The total of 276 included 97 cases of tuberculosis of cervical glands, 83 of abdominal tuberculosis, and 63 of tuberculosis of bones and joints." It is stated to be now generally recognised "that a very considerable proportion of cases of tuberculosis in children is due to the drinking of infected milk." The work of Stiles, Fraser, and Mitchell in this field is classical. It is disappointing to find that the cases are still so numerous, after some 20 years and more of keen effort. It is, however, to be remembered that the tuberculosis cases do not all hail from the city of Edinburgh. Of rheumatism there were 76 cases, and it is pointed out that the institutional treatment in Scotland is insufficient. The hospital is making a strong appeal for funds, which in view of the good work being done should meet with a generous response.

The Royal (Dick) Veterinary College.

Speaking at the annual prize distribution of the Royal (Dick) Veterinary College Dr. T. G. Nasmyth put in a plea for coöperation between veterinary and medical practitioner. Each would be able to tell or suggest something of interest and utility in the domain of comparative pathology. Principal O. Charnock Bradley expressed optimism as to the prospects of the veterinary profession, pointing out that appointments both at home and abroad were getting more plentiful. Lord Provost Stevenson showed how intimate the corporation and the college had always been, and how closely the work of veterinary surgeons bore on the public health. In its recently established meat regulations and its dairy regulations the Scottish Board of Health has done a great deal to make the veterinary surgeon an effective officer in the control of the meat and milk trade. The Empire Marketing Board, in the development of its scientific policy, is opening up new fields for the highest quality of veterinary men. The fact that the Highland and Agricultural Society holds its show this year in Edinburgh is of interest to those connected with the College. The society presents each year 11 silver medals to the College, and, at the very foundation of the College, gave material assistance to the founder, who would hardly recognise his modest beginnings in the large and highly equipped College of to-day.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Artificial Pneumothorax in Childhood.

SINCE 1922 Prof. Armand-Delille, of Paris, has produced artificial pneumothorax in more than 300 young children suffering from pulmonary tuberculosis. At first he confined the treatment to one side only, but of late he has tried simultaneous bilateral pneumothorax in several cases. He claims a large number of cures and concludes that artificial pneumothorax is at present the only means at our command of arresting the course of a disease which almost always proves fatal once ulcerative lesions have developed.

Osiris Prize to Dr. Charles Nicolle.

The special committee of the Institut de France, charged with the award of the Osiris prize (100,000 francs) has announced its intention to propose the name of Dr. Charles Nicolle for acceptance at the meeting of the five constituent Academies of the Institut, which will he held this month. Dr. Nicolle, who directs the Pasteur Institute at Tunis, will thus be rewarded for the work on typhus and recurrent fevers which led to effective control of these diseases during the late war.

Small-pox in Paris.

During the last few months several hundred cases of small-pox, arising it is believed from infection

imported from Northern Africa, have appeared in Paris, 214 cases having been treated at the Claude Bernard hospital alone. Twice as many women as men have taken the infection: the case mortality has averaged 33 per cent., being higher in young children. Compulsory vaccination of everyone leaving North Africa for France is being urged.

Results obtained with a new autolysate for the treatment of cancer, devised by J. Thomas, have been presented to the Académie des Sciences. In three cases, now dating from two, three, and 12 years respectively, the autolysate has appeared to possess curative value.

The memory of Pravaz, deviser of the hypodermic syringe which bears his name on the continent, is being honoured by the erection of a monument in the town of Pont-de-Beauvoisin, in Savoy, and by giving his name to a street in Lyons.

A course in broncho-œsophagoscopy is to be held at the Lariboisière Hospital and elsewhere in Paris from July 11th to 30th, by Prof. Chevalier Jackson with the coöperation of Prof. Sébileau. It will include practical work for six applicants only, and particulars may be had from the Doyen of the Faculty of Medicine, 12, rue de l'École de Médecine, Paris.

The Director of the Hôpital Maritime de Berck-Plage (Pas-de-Calais) announces that a course in surgical tuberculosis and the elements of practical orthopædics will be given there from July 18th to 30th. Dr. Delahaye of the Hôpital will send the programme on application.

The twentieth Voyage d'Études Médicales will be held from Sept. 1st to 10th, under the scientific direction of Prof. Paul Carnot, when the spas of the Eastern Pyrenees will be visited. The inclusive fee will be 1150 francs for British participants. Particulars may be had from Mr. René Gayet, 54, rue du Faubourg St. Honoré, Paris, or in London, Mme. Juppé-Blaise, Federation of the Health Resorts of France, 19A, Tavistock-square, W.C. 1.

CHINA.

(FROM OUR OWN CORRESPONDENT.)

Prostitution in Canton.

EFFORTS are being made by the Canton Government to make legalised prostitution a thing of the past. The Governor of Kwangsi Province has promulgated an order dividing the women of the underworld into three classes. The mistresses of first- and second-class houses will be paid $60 and $30 per girl respectively as compensation for the loss they will sustain in closing their houses. A Government home has been provided for the unfortunate women who will be confined there until such time as they may enter into marriage contracts, when they will be released. This home is on similar lines to one in Chinatown, San Francisco, California, where the Federal authorities send most of the Chinese girls who are found earning their livelihood as prostitutes.

Opium Smoking.

Prominent citizens of Canton are endeavouring to get the Governor to take an interest in the suppression of opium smoking. By far the greater part of this narcotic consumed in the city comes from the province of Kwangsi, of which Canton is the capital; imported opium is much higher in price than the native-grown product. Every day 10,000 ounces of opium are sold in Canton and it is estimated that one out of every ten adult males in Canton is a smoker to a greater or lesser extent. There does not seem, however, to be the slightest chance of General S. H. Wong, the Governor, being induced even to curtail the opium traffic at this time, as the principal source of Government's income in Kwangsi is derived therefrom. Were this revenue lost it would be impossible to support the army, and in these times of civil warfare military needs come first, even at the cost of the people's welfare.

Correspondence.

"Audi alteram partem."

THE CERTIFICATION OF LUNACY.

To the Editor of THE LANCET.

SIR,—The position of the practitioner called upon to give a certificate of unsoundness of mind has become more difficult than ever. The usual procedure for bringing a patient under care and treatment has been, in private practice, by "Reception Order on Petition," that is by an Order of a judicial authority made on the petition of the relatives of the patient, the practitioner giving a certificate on the understanding that if he acts in good faith and with reasonable care he will not be liable to civil or criminal proceedings. It has now unhappily become impossible for him to have any assurance that good faith and reasonable care will secure him from legal proceedings and an adverse verdict. In any given case, even though the practitioner's good faith and reasonable care are admitted, if the jury is of opinion that a person at the time of certification was not in such a state of mental or nervous disorder as to require detention in a mental hospital, the practitioner is liable to a verdict against him, to damages and costs. In short, the jury is vested with diagnostic powers.

But beyond that emerges the curious conclusion that a doctor owes to his patient the duty of reasonable care, but that nothing short of a jury can ultimately determine whether he should take precautions to advise that the patient should be placed under care and treatment or be left without proper care and treatment. Beyond the diagnostic power conferred, the jury becomes also vested with therapeutic skill.

The practitioner must also realise that though the jury has become invested with so many of the fruits of prolonged medical education and hard-won experience, the judicial authority in the case of "Reception Orders on Petition" has virtually lost the legal powers which are nominally his. The Order which he makes is in no real sense an order at all, but is a piece of perfunctory and superfluous pantomime. It is the unhappy practitioner, who is neither legal nor judicial, who in fact is the person to make the order; at any rate the entire responsibility is his. He has to take the consequences while the judicial authority stands aside.

What then is to be done? Until further judicial decision or legislation, necessarily a long time hence, the practitioner must continue to take most serious risks, his action being ultimately determined by his sense of duty to his patients and to the public. The path of "Reception Orders on Petition," as laid down in the Lunacy Act, 1890, Sec. 4 et seq. is a most dangerous one for him. There are, however, other modes of procedure available. There is that by Inquisition, a very distinctly judicial proceeding, in which it is to be hoped that the medical witness receives the protection accorded to any other witness in a court of law. Inquisition is, however, slow, cumbersome, and expensive. There are also procedures by Summary Reception Orders, in which, as it would appear to a non-legal reader of the Act, the onus of causing an alleged lunatic to be visited by medical practitioners is divided between constables, relieving officers, overseers, and justices being judicial authorities under the Act (Sec. 13 (1) (2)). Proceedings under these Sections do not remove the dangers attending certification, but on the face of the Act it would appear to distribute responsibility more equally, and more directly to implicate the judicial authority. I venture to suggest the more extended use of summary Reception Orders, and at least think it would be desirable that the method, as applied to those cases in which proceedings by Reception Order on Petition have in the past been usual, should be ventilated and criticised.—I am, Sir, yours faithfully,

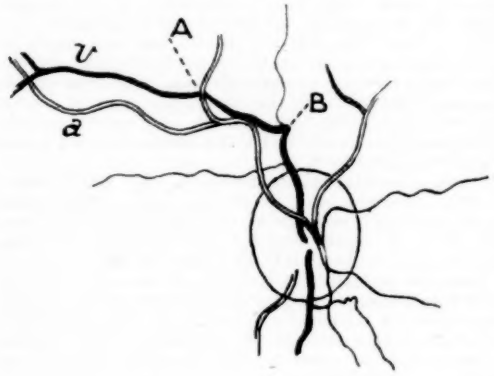
Harley-street, W., July 5th, E. D. MACNAMARA.

"RETINAL PETECHIASIS."

To the Editor of THE LANCET.

SIR,—Dr. Moreland McCrea's claim, under the above heading in your issue of June 18th, to have discovered a form of retinal hæmorrhage "not hitherto recognised," cannot be allowed as an entity. The condition is fully recognised and is generally due to venous thrombosis, of which the drawings he gives are a marked example. His further statement, that a number of patients are condemned to blindness as a "result of this incorrect diagnosis," also requires considerable qualification. Partial thrombosis tends to recovery, and the septic origin of thrombosis is also fully recognised by many of us.

If Dr. McCrea's drawings be examined, it will be seen that the obstruction to the superior retinal vein has occurred at the two points indicated in my diagram. In his drawing No. 1 the vein is blocked at A by the transverse artery crossing it, and also at B, where the vein is kinked on itself. Between A and B the vein can hardly be traced. In No. 2 the block has yielded at B though still compressed at A. In No. 3 the vein seen at A is still compressed by the artery, diminished in size, and distorted from its course—a condition well known as liable to cause



thrombosis—and a recurrence may be expected. The "petechiasis" is the result of the blocking of the vein. Where the thrombosis is mild or partial and limited to a branch of the retinal vein, it gives rise to "petechiasis" and tends to recover spontaneously, or as the result of treatment. Where it is complete, or affects the central vein, it gives rise to gross changes and large hæmorrhages, and recovery is doubtful with or without treatment.

My criticism of Dr. McCrea's case in no way detracts from the value of his paper in insisting on the septic origin of thrombosis as a cause of "retinal petechiasis." The more common cause of partial venous thrombosis is taken to be arterio-sclerosis, which again may be septic or toxic in origin. With this is associated an anatomical factor. Thrombosis takes place where the vein is crossed by an artery. In Dr. McCrea's case the branch is abnormally large and has compressed and displaced the vein, hence the thrombosis. It is a curious fact that the right superior temporal vein is the vessel most commonly affected by thrombosis, of which it will be noted Dr. McCrea's case is another example. It is the thickening and hardening of the arterial wall in arterio-sclerosis that causes the obstruction to the venous circulation when it crosses the vein.

A number of drawings illustrating the condition are on view at Hamblin's Ophthalmic Drawing Department, 15, Wigmore-street, W. 1.

I am, Sir, yours faithfully,

RAYNER D. BATTEN.

Harley-street, W., June 28th, 1927.

DIPHTHERIA IN LONDON.

To the Editor of THE LANCET.

SIR,—In reference to Mr. Maben's letter, appearing in your last week's issue, it should be noted that his figures for diphtheria incidence and mortality for eight large towns deal only with a period of 15 *months* ending March, 1927, whereas the statement in my report,* which Mr. Maben should consult, and which emphasises London as showing the highest incidence and almost the highest mortality among other large towns in Great Britain and capitals in Europe, if not the world, is based on the averages of 15 *years* ending 1925 for the towns in Great Britain, the latest date for which figures were available at the time the report was drawn up. In the tables given on pp. 21 and 22 of the report it will be seen that, among the 13 large cities, London heads the attack rates with 289 per 100,000, Portsmouth coming next with 275, and Newcastle lowest with only 96. In the death-rates, Portsmouth heads the list with 18·1, London fourth with 16·8, and Sheffield lowest with only 5·8 per 100,000.

As regards continental towns, Mr. Maben quotes only a single quarter up to March, 1927. In the report on p. 8 is given a list of the diphtheria death-rates for 1924 in 22 European capitals, headed by Edinburgh with 168, London coming third with 123, and Bucharest last with only 12 per 100,000. The statement in the report's conclusion therefore stands without modification. As regards the year 1926, for which figures in Great Britain are now available, London occupied second place on the list with an attack rate of 296, Portsmouth coming first with 404, Birmingham third, 242, Glasgow fourth, 235, West Ham fifth, 219, Sheffield sixth, 202, Edinburgh seventh, 179, and Newcastle lowest with only 72. In the mortality list London's position, seventh, with 11·9 per 100,000, is lower than in the previous 15 years' average when fourth with 16·8, but with the exception of Portsmouth heading the list with the high death-rate of 28·3, Manchester, Glasgow, and Birmingham second, third, and fourth with 13·4, 12·7, and 12·4, as against 10·5, 12·9, and 10·8, respectively, the rest of the towns show lower death-rates, notably Edinburgh and Bristol, with falls from 17·4 to 10·1, and Bristol 17·0 to 11·1. The Registrar-General's returns of diphtheria death-rates per 1000 population for 1926 are as follows:—

England and Wales ..	0·08	158 smaller towns (population 20,000–50,000)	0·06
105 County Boroughs and Great Towns, including London ..	0·10	LONDON	0·12

Again, therefore, there is reason to dwell on London's high diphtheria figures. With reference to the comparison of London with other capitals and large cities, to draw conclusions from a period as short as three months is obviously fallacious, therefore recourse has been had to the last three years, 1924 to 1926, to show that London's diphtheria mortality occupies a high place on the list. Taking the averages of 1924 and 1925, there are only three continental towns or capitals whose mortality-rates are higher.

Sofia	20·6	Berlin	6·2
Moscow	16·5	Paris	5·8
Rome	13·2	Vienna	4·7
LONDON	11·5	Hamburg	3·1
New York	11·47	Hague	2·4
Dublin	10·25	Oslo	2·0
Leningrad	9·6	Brussels	1·9
Chicago	7·5		

For 1926, figures for twelve European towns and capitals are available, and among these London takes the third position.

Dublin	14·6	Berlin	7·6
Budapest	12·3	Copenhagen	7·0
LONDON	11·9	Stockholm	5·5
Edinburgh	10·1	Vienna	4·2
Paris	8·3	Hamburg	1·7
Warsaw	8·2	Oslo	1·0

* The Prevention of Diphtheria, Med. Res. Council, Special Report Series No. 115.

In reference to other parts of the world may be mentioned :—

1926.		1926.	
Auckland, New Zealand	8·3	Chicago	7·4
New Orleans	8·0	Sydney	7·1
New York	7·9	Madras	1·3
		Bombay	0·54

Quarterly fluctuations are too considerable to admit of fair comparisons of figures for the single quarter of 1927 such as Mr. Maben relies on—e.g., in London the quarterly variations in diphtheria deaths ranged as follows :—

1st .. 188 .... 2nd .. 117 .... 3rd .. 82 .... 4th .. 151

As regards case-mortality, London's position, as Mr. Maben points out, and for which perhaps credit is due, appears in a more favourable light especially in 1926. This may be in part due to the infection having been less uniformly prevalent all over London, but that does not imply that the disease has been milder in form, for its incidence during the past 18 months has been markedly focal and concentrated in particular areas, especially in parts of Deptford, Bermondsey, Southwark, Lambeth, and Battersea. In these foci of infection the disease has shown no diminution of its malignancy. Possibly but not positively also London's low case-mortality *may* be attributable to a larger proportion of the notified returns being uncorrected for errors in diagnosis in London than elsewhere. But it may be hoped that efforts to secure prompt treatment which the authorities have frequently urged and the efficiency of the treatment in M.A.B. hospitals has borne fruit. Thus of the large towns the diphtheria case-mortalities per cent. may be quoted as follows :—

Fifteen years' average.		1926.	
Newcastle	6·2	West Ham	2·8
Bristol	6·2	LONDON	3·9
Sheffield	6·3	Sheffield	4·7
Bradford	6·4	Birmingham	5·1
Portsmouth	6·5	Glasgow	5·3
Cardiff	6·8	Edinburgh	5·6
LONDON	6·8	Cardiff	5·6
Glasgow	8·5	Bristol	6·0
Leeds	8·8	Bradford	6·1
Edinburgh	9·0	Liverpool	6·7
Birmingham	9·6	Portsmouth	7·0
Liverpool	10·0	Newcastle	8·0
Manchester	10·4	Manchester	8·2
New York	8·2	New York	6·4
Chicago	9·5	Chicago	8·1

There has, moreover, been a general steady decline in case-mortality throughout England and Wales in the last decade from 10·9 in 1918 to 5·8 per cent. in 1926.

A discussion of the influence of errors in diagnosis of notified cases on the attack rates, to which Mr. Maben alludes, finds place in the report on p. 22. It must, for want of more accurate information, be assumed that such faults in the returns of notified cases, reckoned as diphtheria, affect the accuracy of all the sources of information uniformly and therefore do not prejudice one return more than another.

I am, Sir, yours faithfully,

J. GRAHAM FORBES.

County Hall, S.E., July 4th, 1927.

ETHER CONVULSIONS.

To the Editor of THE LANCET.

SIR,—In your issue of June 25th Dr. Gwathmey of New York attributes the convulsions I have described during the administration of ether to the presence of congestion of the lungs in these cases, and he expresses the view that such a condition is avoidable by preliminary medication. Whilst readily admitting that any condition which interferes with pulmonary ventilation is a possible contributory factor, such an explanation entirely ignores fundamental facts which cannot be disputed :—

1. Ether has been in continual administration for 70 to 80 years, yet these convulsive manifestations were not noted until 18 months ago.

2. For 50 years ether was administered without any preliminary medication with far more oxygen limitation and in greater concentrations than are usual at the present day, yet these convulsive attacks were never observed.

3. If the condition were due to insufficient ventilation by the lungs, the clinical features would be those of asphyxia and readily recognisable by any administrator of moderate experience, whereas cyanosis only developed after the respiratory centre ceased to function, and did not precede the convulsive attacks.

4. The presence of the impurities referred to in my paper does lead to pulmonary changes, as pointed out by Prof. Storm van Leeuwen, whilst such changes are not noticeable if a pure ether is used.

It is clear that the manifestations I described are of comparatively recent development and attributable either to changes in the ether or in modern methods of administration or both, and that the whole problem of the effects of pure ether requires reinvestigation in the light of these occurrences. Premedication by reducing the amount of a toxic ether will, of course, diminish the toxic effects, but the real solution lies in the exclusion of the toxic agent.

I am, Sir, yours faithfully.

Manchester, June 27th, 1927. S. R. WILSON.

PSYCHOGENIC ASTHMA.

To the Editor of THE LANCET.

SIR,—With reference to Mr. Moxon's letter in your issue of June 18th respecting Dr. E. B. Strauss's report of two cases of psychogenic asthma (THE LANCET, May 7th, 962), I should like to point out that they seem to me to be on all fours with Rivers's often cited case of claustrophobia. I discussed this in a paper published in the *British Journal of Medical Psychology*, October, 1925, v., 92–105, where I pointed out what seems to me to be the mechanism of formation of such neuroses.

If an exceptional experience, A, engenders a powerful emotion and is at the same time accompanied by some accidental experience, B, an experience that by itself would not arouse the emotions, then the recurrence of B tends to arouse a like emotion. At first the association between B and the emotion is not very strong, but gains in strength with repeated occurrences of B, until at last it becomes so strong that B itself gives rise to the emotion. This I regard as but a specific case of the "conditioned reflex," and it also explains very well the so-called "period of incubation," so often observed in war neuroses.

In my case referred to above there was A, the air-raids which engendered emotions of distress. The simultaneous accidental experience was the bright moonshine. Long after the air-raids had stopped the moonshine gave rise to states of vague anxiety, not directly attributed to the moonshine, and which states of anxiety became gradually stronger as time went on, until they were strong enough to engage my attention as to their cause. This required but little searching and the acquired knowledge of the causal connexion soon cleared up an incipient neurosis.

In Rivers's case there was A, the snarling dog which frightened the boy ; B, the passage, or enclosed space, where the boy happened to be at the time. His fear was increased as there seemed no means of escape. Gradually, as the boy grew up any enclosed space aroused fear, and the association with the idea of inability to escape would be strengthened. The case became one of claustrophobia, which again was cleared up as soon as causal relations had been established or understood by the patient.

In Dr. Strauss's cases there was A, the treatment the boy received from his nurse, followed by the experience of suffocation, and B, certain not definitely ascertained home surroundings. Whilst the boy was in hospital—i.e., away from home—he was free from asthmatic attacks, but he relapsed as soon as he returned home again. In the case of the woman teacher there was A, the accident of falling into the water and missing being drowned, evidently accompanied by the experience of suffocation. A reinactment of the accident in dreams was followed by

asthma. The dyspnœa in these cases is but a part of the emotional disturbance.

It is, in my view, not the bringing into consciousness, as such, which produces the cure, but the intelligent understanding by the patient of the causal relation of his trouble with the original occurrence. Dr. Strauss's juvenile patient was in all probability an intelligent child. This view of mine is confirmed by Janet's case "Marie," who being a stupid peasant girl could not be cured by bringing into consciousness the original occurrence which caused her stigmata; she was not able to grasp the significance. She was, however, relieved of her troubles by suggestions that the occurrences had never happened.

I venture to think that your readers will prefer such simple explanation of Dr. Strauss's cases, which has the advantage of being based on known physiological or psychological facts as well as clinical observation, to Mr. Moxon's psycho-analytic speculation.

I am, Sir, yours faithfully,

Shortlands, Kent, June 21st, 1927. A. WOHLGEMUTH.

"AN OPPORTUNITY FOR PHARMACISTS."

To the Editor of THE LANCET.

SIR,—I read the annotation on this subject in your last issue with satisfaction, because the balance was so justly held. I was present when the paper was read, and had the advantage of hearing the discussion on it.

The pharmacist, by his training, from bottle-washing to the higher flights of chemistry and botany, is usually an adaptable person. He has to learn so many things that an extra subject is hardly noticeable, but he is also faced with the necessity of earning a living. My experience, in a good-class suburban business, is that so far there is no sign of an opening for pharmacists of the kind alluded to by Dr. Burn. I say this with due respect to the author of the paper, and would add that I am not writing in my capacity as a member of the Council of the Pharmaceutical Society, but rather as an ordinary pharmacist. My personal opinion is, that the present pharmaceutical curriculum is more than adequate to meet the requirements of everyday practice. At the same time it was made quite clear, in the most instructive discussion, that if pharmacists are required to undertake the work outlined by Dr. Burn they will not be found wanting.

One speaker after another, who had been specially trained for the work, asserted that there was "no opening," and that what work there was went to central laboratories. The reduced allowance for "insurance dispensing," coupled with the high cost of living, make things very difficult for the pharmacist who has to depend solely on the so-called professional side of his business. To make both ends meet he is compelled to secure "side lines" of a commercial kind, for which there is a demand.

I need hardly add that the Pharmaceutical Society, old as it is, is none the less alert, and I agree with you that the time may come—and probably will come—when there will be a cleavage between two schools of pharmacy, but the time is not yet.

I am, Sir, yours faithfully,

Ealing, W., July 3rd, 1927. THOMAS MANUS.

ANÆSTHETISTS AND INQUESTS.

To the Editor of THE LANCET.

SIR,—The tendency to throw blame upon an anæsthetist indicates a state of mind which has parallels in the suspicion surrounding certification of the mentally unsound, and, as shown by recent legislative events, the control of the mentally defective. But it has results peculiar to itself. Fortunately the judgment of a surgeon is rarely hindered by fear of criticism in the event of an unfavourable issue, and on the whole it is well that it is so. When grave problems have to be faced, and risks to be taken, the decision must not be influenced by the possibility of the operator being called upon publicly to face an inquiry, the mere holding of which implies that his conduct and skill are impugned. The freedom from this danger allows of free discussion and, if necessary, free technical criticism from those qualified to offer it, but these advantages are absent when an inquest is given a capricious publicity undirected by a knowledge of the risks, practically negligible in the mass, that remain after the fullest care and skill have been exercised.

The demand for explanation of deaths under anæsthetics has, in fact, seriously hindered the advance of knowledge. The writer has no recollection of any inquest concerning such a death in which medical witnesses have frankly admitted that there was no pathological condition found post mortem to account for the death, and we may safely assume that such an admission would inevitably have led to the belief that the fault lay with the anæsthetist.

A certificate of death records whether any operation has preceded the fatal issue, and it is perhaps partly due to the antiquity of the surgical art that the question whether the operation has caused or hastened death is rarely raised. Anæsthetics are modern, and their introduction was marked by opposition of a peculiar kind, in which theological considerations played a part, but we cannot say how far a relic of this opposition is responsible for the selection of this one mode of death as demanding a definite pathological explanation. We, as a profession, are sometimes accused of assuming the mantle of infallibility, but in this matter the mantle is forced upon unwilling shoulders. A medical witness would risk professional ruin if he told a jury "I gave this anæsthetic with a correct technique, with every care and precaution, but the patient died, and I cannot tell you why he died."

The fact that the thymus is often found enlarged has in many cases served as a basis for explanations which satisfied coroners' juries and the public, and gave us a sense of finality which solved the immediate difficulty and arrested further inquiry. But now doubt is being thrown upon the existence of status thymico-lymphaticus, and each of the many deaths ascribed to that condition represents an unsolved problem. Prof. Carl Hart, to quote only one writer, says: "For the teaching concerning status thymico-lymphaticus began like many other teachings. At first accepted grudgingly by physicians, it has now more and more fallen a prey to uncritical application and exaggeration, and finally become a great rubbish heap upon which all conceivable morphological and functional phenomena have been thrust." (Die Lehre vom Status thymico-lymphaticus. Munich: J. F. Bergmann. 1923. P. 1.)

The observation in your leading article of June 25th, that the publicity of these inquests instils fear into the public mind, and thus increases the possible dangers of anæsthesia, perhaps contains the clue which has been obscured by that demand for material explanations which produced the hypothesis of status thymico-lymphaticus. It needs no psychologist to prove that fright can kill. But may it not be that the neglect of psychological considerations on the part of ourselves, in conjunction with an unfortunate demand from the public for physiological explanation, has led us astray from the scientific path?

I am, Sir, yours faithfully.

June 27th, 1927. OPERATING SURGEON.

INCREASE IN HOSPITAL BEDS.—During the past few weeks several foundation-stones have been laid, not only of voluntary hospitals, but also of Poor-law institutions. Willesden General Hospital is to have two new wards, one for children, and a new operating theatre. At Brixham, on a beautiful site at the edge of the town, a new hospital is being erected. The guardians at Derby for the last 14 years have realised the need for enlarging their hospital. The site of the new building is opposite the existing Poor-law institution; it is calculated that the hospital will cost over £83,000.

Obituary.

JAMES WALKER DAWSON, M.D., D.Sc., F.R.C.P., F.R.C.S. EDIN.

THE death of Dr. James Dawson at his home in Edinburgh will be deeply regretted not only by his personal friends and colleagues in Scotland, but by many who knew him only by his published work. Dr. Dawson had a shy and retiring disposition; he shunned publicity, and spent the last 20 years working steadfastly in his laboratory. The outside world saw little of him, but the charm of his personality was at once manifest to those who interrupted his labours to seek advice or help. This was never denied, but indeed was given in full measure; no trouble could be too great if its object was to further research.

Throughout his life Dr. Dawson was hampered by ill-health. He was born in India in 1870, and began his medical course at Edinburgh University as early as 1886, but was interrupted by ill-health and did not graduate till 1904. Four years later he obtained the degree of M.D., being awarded a gold medal for his thesis on Inflammation, and shortly after this he was awarded the Syme Surgical Fellowship. He was later a Carnegie Research Fellow, for a time assistant pathologist to the Royal Infirmary, and was pathologist to the Longmore Hospital to the time of his death. Dr. Dawson's main work was performed as histologist to the Research Laboratory of the Royal College of Physicians, Edinburgh; here and in the library of the College he carried out those most careful and painstaking observations on pathological histology which brought him fame. Up to 1916 neurological pathology formed the greater part of his research, in particular, disseminated sclerosis, multiple neuromata, and the lymphatics of the nervous system. Thereafter he devoted much time to the study of malignant growths. His exhaustive monograph on the melanomata, beautifully illustrated by 30 plates, ranks as a classic work of reference. With Mr. J. W. Struthers he wrote an authoritative article on Osteitis Fibrosa; his final illness prevented the completion of a paper on breast tumours. Most of his research appeared in the *Edinburgh Medical Journal;* we have often had occasion to draw attention to its importance.

Dr. Dawson was a Fellow of the Royal College of Physicians of Edinburgh, and was elected a Fellow of the Royal College of Surgeons of Edinburgh in recognition of his valuable services in the advancement of surgical knowledge. His routine surgical reports are worthy of special note. Specimens referred to him for his opinion were invariably subjected to a keen and critical examination, and exactly those points were stressed which enabled the surgeon to gauge the extent to which operation should be carried. He was one of the vice-presidents of the Section of Pathology and Bacteriology at the British Medical Association annual meeting to be held in Edinburgh next week. This year also he was to have delivered the Morison lectures by invitation of the Royal College of Physicians of Edinburgh, and he had already collected a considerable amount of data for this purpose; it is to be hoped that this material will not be completely lost to science.

During the war Dr. Dawson acted as lecturer in the University of Edinburgh, and was to have continued in this post; but few had the benefit of his teaching, since ill-health forced him to resign.

A fellow pathologist writes: "His pathological friends have to thank James Dawson for much good work, and it is sad to think that there can be no more of it. The quality was such, and reached by such thorough painstaking toil, that we all trusted and believed in what he had to say about disseminated sclerosis, the healing of wounds, osteitis fibrosa, and lastly in his monograph on the melanomata. Dawson believed in it too, for when he had got through the painful process of satisfying his own conscience that his conclusions were justified, it was not easy to get him to modify any definite opinion that he had achieved. His ally, Mr. Hamilton, will continue to produce the beautiful large sections which Dawson did so much to popularise, and his essay, Religio medici, is a permanent record of the gentle sincerity with which he lived."

JOHN LEACH, M.B., C.M. ABERD.

Dr. John Leach, who died last week at Graffham, Sussex, where he was acting as resident physician to Lord Woolavington, was a familiar figure in the North of Scotland, for he had practised for over 30 years at Beauly, his duties taking him into the remotest parts of Ross-shire. He was born at Ardersier, Inverness-shire in 1867, educated at Marischal College, Aberdeen, qualifying in 1892, when he took resident appointments at Inverness District Asylum and at the Manchester Maternity Hospital before settling in Beauly. Here he came to take a large part in public life, representing his division on the county council and serving on the parish council and school-board. He was also an active member of the county insurance and panel committees. His first association with the Territorial Service was when he was medical officer at Beaufort to the Scouts raised by Lord Lovat during the South African War, and he retained the appointment of medical officer to the 1st Lovat Scouts Yeomanry tili 1915, when for the remainder of the war he was attached to the Highland Mounted Brigade Field Ambulance at Inverness. Dr. Leach was the recipient of many marks of respect and affection on his recent retirement from general practice. He was in his sixty-first year and leaves a widow and three sons, one of whom maintains the family medical tradition at Beauly.

CHARLES GASKELL HIGGINSON, M.A. LOND., M.D. DURH., L.M.S.S.A.

Dr. Higginson, who died in a nursing home at Edgbaston, Birmingham, on June 26th, in his sixty-ninth year, was son of the Rev. Edward Higginson and was educated at his father's school at Swansea and later at London University, where he took his M.A. in 1881 with distinction in philosophy and economics. It was not until some ten years later that he entered the Manchester Medical School, from which he qualified in 1897, thereafter spending three years in resident hospital appointments and finally acting as assistant to Dr. F. R. Walters at Crooksbury Sanatorium, where his interest in tuberculosis was awakened. After settling in Edgbaston his practice developed in this direction, and he contributed freely to medical journals on such subjects as the rational treatment of capillary hæmoptysis, the cure of consumption according to the methods of George Bodington and Henry MacCormac, and the technique of staining tubercle bacilli. During the war he acted as civil surgeon to the 2nd Birmingham War Hospital. Never very robust, his activities covered a wide intellectual field; he was an earnest student of poetry and an accomplished traveller.

WALTER HENRY RYAN, M.R.C.P.I.

Dr. Ryan, who died at his home in Roade, Northamptonshire, on June 26th, was a practitioner well known throughout the county. A native of Scarteen, co. Limerick, he was educated at St. Mary's College, Oscott, and studied medicine at the National University of Ireland, qualifying in 1876 and being elected a member of the Irish Royal College of Physicians 12 years later. On returning to this country he acted first as assistant at Leighton Buzzard before practising on his own account at Hanslope and later at Roade. He became medical officer to the local rural district council and to the board of guardians, on which he served as a member for many years. No mean cricketer himself, he was a member of the county club for nearly 40 years and was indefatigable in arranging tennis tournaments on behalf of local charities. At the time of his death he was the oldest member of the Grafton Hunt. He leaves a widow and a son in the Royal Army Medical Corps.

The Services.

ROYAL NAVAL MEDICAL SERVICE.

Surg.-Rear Admi. Arthur Gaskell, C.B., O.B.E., took up his duties as Director-General of the Medical Department of the Royal Navy on July 1st.

Surg.-Capt. A. R. H. Skey and Surg.-Capt. H. C. Whiteside to be Surg. Rear-Admirals.

Surg. Comdrs. C. T. Baxter, A. McCloy, and G. L. Buckeridge to be Surg. Capts.

Proby. Surg. Lt. R. Erskine-Gray to be Surg. Lt.

Surg. Lt. D. H. Kernohan to *Pembroke*, for R.N. Barracks, Chatham.

ROYAL NAVAL VOLUNTEER RESERVE.

Surg. Lt. W. J. Payne to *Victory*, for R.N. Hospl., Haslar, for 28 days' training.

Surg. Lt. (D.) W. M. Bull, to *Victory*, for R.N. Barracks, for 14 days' training.

Proby. Surg. Sub.-Lt. D. W. Bawtree, to *Tiger*, for further 14 days' training.

ROYAL ARMY MEDICAL CORPS.

Temp. Capt. W. Bligh to be temp. Maj.

TERRITORIAL ARMY.

W. C. Armstrong to be Lt.

Supernumerary for service with O.T.C.: 2nd Lt. W. E. Underwood, from the Gen. List, T.A., to be Lt. (Med. Unit, Lond. Univ. Contgt., Sen. Div.).

TERRITORIAL ARMY RESERVE OF OFFICERS.

Lt.-Col. F. A. Roper, from Active List, to be Lt.-Col.

Maj. (Bt. Lt.-Col.) C. H. Lindsay, from Active List (Supern.), to be Maj. (Bt. Lt.-Col.).

Capts. D. Cameron and R. A. Quinn, from the Active List, to be Capts.

ROYAL AIR FORCE.

Wing Comdrs. to be Group Capts.: A. V. J. Richardson and J. McIntyre.

INDIAN MEDICAL SERVICE.

Lt.-Col. W. D. A. Keys to be Bt. Col.

Maj. J. Scott to be Bt. Lt.-Col.

Capt. C. J. L. Patch to be Maj.

Lt. H. W. Mulligan to be Capt.

SMALL-POX LEAVE RESTRICTIONS.

A Fleet order announces that restrictions, on account of small-pox, are applicable in Abercarn, Abersychan, Blaenavon (Mon.); Annfield Plain, Auckland, Brandon and Byshottles, Chester-le-Street, Crook, Durham, Easington, Felling, Gateshead, and Hetton (Durham); Ashington (Northumberland); Bentley-with-Arksey, Conisbrough, Doncaster Borough and Urban District (Yorks); and Derby.

DEATHS IN THE SERVICES.

Surgeon Rear-Admiral George Albert Dreaper, Extra Hon. Surgeon to the King, who died on June 28th at the Royal Naval Hospital, Haslar, within a few days of 64 years of age, was educated in Dublin, and entered the Royal Navy in 1884. He was staff surgeon of the *Magicienne* during the Jubaland expedition, 1900–01, when he was landed in charge of the military hospital, and received the appreciation of the Admiralty, the General African Medal, and the Jubaland clasp. In the Somaliland expedition of 1904 he was fleet-surgeon of the *Fox* in command of the medical staff, and was landed for the capture of the Mullah's stronghold at Illig. For this service he was mentioned in dispatches, and received the General East African medal with clasp for Somaliland. From 1908–10 Fleet-Surgeon Dreaper was in charge of the surgical wards at Chatham Naval Hospital, and was promoted to Deputy Surgeon-General in 1913. Later he took over the charge of the surgical wards at the naval hospitals at Plymouth and at Hong-Kong. He was promoted to Surgeon Rear-Admiral in 1919, was made C.B. in 1920, and was in command of the Royal Naval Hospital at Chatham until 1923 when he retired. In 1910 he married Constance Amy, daughter of Mr. Henry de Blaquiere, J.P., of Fiddane, Gort.

Col. John Smyth, I.M.S., retd., died at his residence, Apsley-road, Clifton, on July 2nd. He graduated M.D., M.Ch. R.U.I. in 1879 and received his first commission in the Army in 1881, reaching the rank of Major in the I.M.S. in 1893, Lt.-Col. in 1901, and Col. in 1911. He served with the Soudan Expedition, 1885, and was present at the actions of Hasheen and Tofrek; and the destruction of Tamai, where he was wounded. (Medal with two clasps; bronze star.) He had also been medical officer to the Maharajah of Mysore and Honorary Surgeon to the Viceroy.

Parliamentary Intelligence.

HOUSE OF COMMONS.

WEDNESDAY, JUNE 29TH.

MINISTRY OF HEALTH VOTE.

THE House went into Committee of Supply on a vote of £12,943,593 for the salaries and expenses of the Ministry of Health. Mr. CHARLES EDWARDS was in the chair.

Mr. NEVILLE CHAMBERLAIN (Minister of Health) said that this year there was an increase in the vote of a little more than £1,105,000, but he did not imagine that he would be accused of extravagance, because the increase was due to causes which operated automatically, and was, moreover, brought about by policies which had been approved in all quarters of the House. Some £960,000 was accounted for by an increase in the number of houses upon which subsidy was paid, and there was a further £171,000 on the grants-in-aid for health purposes, and still another increase of £91,000 in respect of the cost of administration due to the additional staff required for the purposes of the Contributory Pensions Act. The amount provided for housing—£9,340,000—was nearly half of the total estimate amounting approximately to £19,500,000. In the five years preceding the war the average number of houses built in this country was about 61,000. Taking the last three years—in each case the 12 months ended March 31st—the number built in 1925 was 137,000; in 1926 it rose to 173,000; and in 1927 to 217,000. That was really an astonishing, a prodigious effort on the part of this country which he did not think could be paralleled anywhere else in the world. (Cheers.) The number of houses which had been added to the common pool was so great that as it proceeded its effects would be felt through every class of the population, and he felt confident that they were approaching the time when they might hope to see some much more active progress made with the improvement in the conditions of the slums. The cost of the new houses, however, appeared to him to be far too high, and the problem before them at the moment was to see how that cost could be reduced. There were two ways by which it might be reduced; one concerned the size of the house. There was very little doubt that the rents which had to be charged for the bulk of the new houses were inflicting a very great strain on those who were paying them, while they made it impossible for many others to obtain the accommodation which they desired in a new house, because it was altogether beyond their means. He was not in favour of lowering the standard of housing, but it was no use to blink facts, and while it was very easy to be eloquent about the difference between the houses occupied by the rich and the poor, as a matter of fact they could not divide the population by a sharp line into two categories of that kind. Everything must be adapted to the question of means, otherwise people would come to disaster. He thought that it was a mistake to assume that every family wanted a bigger house which not only meant more rent to pay, but entailed more work in keeping clean and warm. Local authorities were finding that they were getting towards the end of that section of the community which could pay the rents of houses such as they were now erecting and that being so he thought they were wise in remembering that what they had to compare was not a small new house with a large new house, but a small new house with the houses in which people were living now, or the rooms in a house in which they were living now, and that if they built houses which contained all the necessaries of life, but with somewhat smaller accommodation than was contained in the houses which they had been building lately, they would probably meet the wishes of the greater number of their inhabitants. Events had completely justified the predictions he had made last December, when he asked the House to approve the draft Order under which the subsidies payable under the Acts of 1923 and 1924 would be reduced as from October next by an amount which was equivalent to a capital sum of £25 per house. The prices of non-parlour houses which before the commencement of the withdrawal had ranged from £440 to £450, fell immediately to the neighbourhood of £425 for houses with exactly the same accommodation. Since then there had been a still further drop. Last month the average size of the houses was distinctly smaller and the prices had actually gone down to something below £400.

Town Planning.

Public appreciation of the value of town planning seemed to be generally increasing. It saved unnecessary and wasteful expenditure in the future and at the same time preserved amenities and conveniences for the public. At the present time some 2,700,000 acres were covered by town planning and regional planning schemes. The development of regional planning was of the greatest importance, because it was obvious that to plan a limited area without regard to

what would happen in the surrounding areas must necessarily mean a good deal of wasted time and might lead to the adoption of plans which subsequently would have to be altered. Therefore he was glad to know that the adoption of regional planning which involved the coöperation of a great number of local authorities was proceeding so rapidly and smoothly, and he thought that further progress in that direction would be very valuable for the country as a whole. In those schemes and otherwise local authorities were beginning to make much greater provision for playing fields. In this connexion steps had at last been taken to set up a Regional Committee for Greater London which presented problems which were unique in the constitution of its local authorities and in the extent of its area. Another matter to which he wished to refer was the preservation of London squares. The Government had accepted the view of the London County Council and proposed to set up a Royal Commission to go into the whole question. With regard to national health insurance he would like to say something about the additional benefits provided out of surpluses disclosed upon the second valuation of approved societies. Nearly £24,000,000 was shown to be available for distribution under the second valuation, but out of that sum over £11,000,000 had already been allocated by the societies for additional cash benefits, leaving about £12,000,000 available for non-cash benefits. The latter sum was increased by the State grant and interest until it had reached the astonishing sum of £18,000,000 available for distribution in treatment benefits during the five years covered by the surpluses under this valuation. That meant that altogether some £3,750,000 a year could be and was being spent on these additional treatment benefits. The societies had allocated to dental benefits as much as eight times the amount they were able to allocate under the first valuation and to ophthalmic benefit as much as 12½ times the amount they had formerly allocated. In connexion with dental benefit a scheme had been arranged under which for the most part the societies paid 100 per cent. in the case of conservative treatment of teeth and 50 per cent. of the cost of dentures and they had set up as recommended by the Royal Commission a regional dental service consisting of one principal and five regional dental officers whose duty it was to advise in cases of dispute between approved societies and dentists. That had required and would require a large number of examinations of the persons concerned. Up to the present there had been something like 2600 references to these regional officers. The greater part of those references had already been cleared, but a certain amount of delay had been experienced owing to the fact that nearly 40 per cent. of the insured persons had failed to keep their appointments with the dentists. He hoped that as insured persons got more experience their attendances would improve, and he felt very well satisfied that the provision of this additional benefit, under which over 13,000,000 people, many of whom had never been in the hands of a dentist before, would now have their teeth attended to, would mean greatly improved health on the part of insured persons and as a consequence a decrease in the claims upon the funds of the approved societies. The International Labour Conference which had just concluded, and which represented about 38 countries, had adopted a draft convention which was based principally on the same principles as our own health insurance scheme, and he had hopes that the majority of the countries, at any rate, would ratify the convention.

Improvement in Public Health.

With regard to the state of the public health he was glad to be able to give a good report. There were two general tests which they applied—namely, the general death-rate and the infantile mortality-rate—and in both cases there was an improvement. Last year the general death-rate was 11·6 per 1000, compared with an average of 12·2 per 1000 in the five years preceding, and the infantile mortality-rate, which had been 76 per 1000 in the preceding five years, had come down to 70. This denoted a general improvement in the physique of the infant population and also an increase in the understanding of the responsibilities and duties of motherhood. One could not say too much in praise of the great system of maternity and child welfare centres which were now spread throughout the country and on which an immense amount of devoted voluntary effort was being expended. To that he thought they must ascribe the continued improvement in the infantile mortality-rate, with which they had so much reason to be satisfied. In other respects the health of the nation continued to improve. There was a steady decline in the mortality due to tuberculosis, to scarlet fever, and to typhoid fever. He wished he could say as much for cancer. He was sorry to say that the deaths from cancer continued to increase and he was not able to announce any new discovery which gave them hope of being at an early date able to cope with that disease. But their knowledge was increasing all the time, and he had little doubt that the day would come—and he hoped it was not far distant—when they would be able to put cancer among those diseases of which they considered themselves the master. The records of small-pox in this country were becoming very alarming. In 1922 there were 973 cases; in 1923, 2500; in 1924, 3800; in 1925, 5300; in 1926, 10,100, and this year up to the end of May they had had 8700 cases. Those were for England and Wales, including London; they did not include Scotland. Fortunately the type of small-pox at present was of a very mild character, but one was always afraid that they might see a recurrence of that very virulent form of which they had had experience before and which was one of the most deadly diseases of which they knew. He had set up a committee to inquire into the question of vaccination, and he would not say any more on that subject, except that it was quite clear from these figures that the extent of the disease was now assuming serious proportions and even though mild in character it was inflicting an amount of pain, suffering, and loss which was preventable, and ought to be prevented, and presently they would have to take some further steps to see if they could not diminish it. He wondered whether the Committee realised the part which this country was playing in measures which were taken internationally for the prevention of disease and the improvement of health. The League of Nations had a Health Committee upon which this country had a representative and upon which there was also a representative of India. He hoped that in future there might also be representatives of other parts of the Empire. This Committee was engaged at the present time in two pieces of work which were certainly of direct interest to us as a country and to the British Empire. One of them was concerned with the establishment of an Epidemic Intelligence Centre at Singapore. The sanitary administration of the ports in the Far East was a particularly difficult problem because each one of those ports was surrounded by great areas in which the conditions were such that epidemic diseases were always present, and it was of the very first importance to prevent the spread of diseases like yellow fever, plague, or small-pox by communicating information from one sanitary port officer to another. By the generosity of the Rockefeller Trustees this Epidemic Intelligence Centre had been established at Singapore, and thanks to that and the introduction and development of wireless it was now possible to convey information with great rapidity and at an extremely low cost, and he thought the results were invaluable to British interests generally and to British shipping in particular. There was also the work which was being done by the Health Committee of the League of Nations in the investigation of the prevention of malaria. A great deal was already known about malaria, thanks largely to the researches of British investigators. They knew that malaria could be stamped out in particular localities, as had been done in Panama, but these measures were very expensive, and what the League was doing now was an attempt to discover some new methods of prevention which might perhaps be less intensive in their scope, but which would be less expensive and could therefore be put into operation over larger areas. At the Paris Sanitary Conference, held last year, and the Pacific Health Conference at Melbourne, this country was very ably represented by officers of his department.

Hygiene and Tropical Medicine.

He had finally to mention two projects, both of first-rate importance, which were now proceeding in London. In 1920 a committee was set up under the chairmanship of Lord Athlone by the then Minister of Health, Dr. Addison, and one of its recommendations was that there should be established in London a school of hygiene and tropical medicine. That school was now being built. The Rockefeller Trustees, who took the greatest interest in all matters of international health, had contributed a sum of $2,000,000 and the British Government had made itself responsible for the maintenance of the school when it was completed. The school was of the greatest interest to the British Empire, because there were so many portions of our Empire in the tropics whose future prosperity depended largely on our power to control tropical diseases which at present took such a tremendous toll of our people and of the native populations. They believed that this school would form a centre to which could come those who were proposing to embark on a career as medical officers of health or medical practitioners in the tropics. They would be able to see there clinical material actually suffering from the tropical diseases which they would find when they got to their destinations and where also they would be able to study those general principles of public health which governed all administration of the kind, whether in the tropics or in temperate climates.

Post-Graduate Medical Study.

The other project was also one of the recommendations of the Athlone Committee. It was that there should be established in London a post-graduate medical school. Unfortunately for one reason or another this

recommendation had never yet been carried out, but now he thought they were approaching a time when they would see it accomplished. Some little time ago he had set up a strong committee of physicians and surgeons under his own chairmanship to consider what was the best way of carrying the proposal into effect. The committee laid it down that it was not possible to combine in one school undergraduate and post-graduate teaching, and that was a conclusion which he thought was supported by all expert opinion. Therefore they had to consider whether they should contemplate the building of a new school or whether it would be possible to adapt some existing institution. They decided against the building of a new school, because that meant, in order to obtain the necessary clinical material, the building of a hospital with 400 beds which would have involved not only a very large capital expenditure, but also an annual liability for the maintenance of the hospital. The Committee therefore devoted themselves to an examination of various existing institutions, and they came to the conclusion that they could find what they wanted in the West London Hospital at Hammersmith. That was a hospital which had a long experience of post-graduate teaching. It had space into which it could extend, so that the necessary lecture rooms and laboratories and additional beds could be provided, and the scheme had been accepted in principle by the authorities of the West London Hospital. At the present time the buildings were being examined by technical experts with a view to seeing how they could be adapted and extended so as to make them available for this purpose. If this scheme could be brought to a conclusion it was going to be a great thing for the medical services of this country and of the Empire, and he might almost say of the world. One of the difficulties to-day was that medical practitioners who might have had a magnificent training before they entered into practice went down into some remote part of the country and found themselves unable in any way to keep abreast of the most modern work. He hoped that in this school it would be possible to give short refresher courses to general insurance practitioners.

Mr. MACLAREN: Would it be compulsory?

Mr. CHAMBERLAIN said that he was not contemplating that at present; obviously financial difficulties would arise. He hoped, however, that practitioners would avail themselves of it as it became further known. More than that, it would be a meeting place where medical men would come from all parts of the Empire to exchange ideas and experiences, to see what the latest experiments and the latest methods were, and what success had attended them. He found that in America also a project of this kind was welcomed most warmly. Many American doctors liked from time to time to come over to Europe to see what was being done here and to check their own experience against European experience. The completion of a scheme of this kind would mean the expenditure of large sums of money, but when it was realised what a great conception this was and what a vast influence it might have in raising the general standard of medical practice, not only in this country, but in other countries, he felt confident that the funds that were necessary would not be wanting.

Dr. VERNON DAVIES: Would this hospital be built and financed by the State or privately?

Mr. CHAMBERLAIN: I am not at present contemplating that it should be financed by the State.

Dr. DAVIES: What connexion will the Ministry of Health have with it?

Mr. CHAMBERLAIN: It is possible that a contribution might be given to such a hospital from the educational point of view, and that would bring the Ministry of Health into very close contact with it.

Mr. CRAWFURD moved to reduce the vote by £100.

Criticism of the Ministry.

Mr. RHYS DAVIES said that some sections of the community were very dissatisfied at the present position in regard to deaths of women in childbirth. He was informed that about 3000 women died from that cause every year in this country, and he would like to know whether London was better placed in regard to convenience and technical skill in dealing with maternity cases than the provinces. If that was so, he would urge the Minister to do something to save their womenfolk in the provinces and to see that they had the same facilities which were provided for the women of London. As regarded the question of housing he thought that the Ministry of Health ought not to concentrate on reducing the size of houses, but rather on reducing the cost of building them. The Minister had said that the cost of houses was too high, but he had not told the Committee what he was going to do to reduce the cost. He was glad that regional dental officers had been appointed to check the work of the dentists, because he was convinced that a few of the dentists even now did not play the game with approved societies. Complaints from some quarters were so strong that some of the approved societies were already thinking of diverting some of their surplus funds for use in other directions. If some of the dentists and opticians did not treat the societies better he would make it his business to see whether other additional benefits could not be established in order to divert the funds from those purposes. He must say, of course, that it was only a small section of the dental and optical professions that he complained abou . The work of regional dental officers had been made very difficult, and there were many complaints of delay. He did not see how those delays were to be avoided. The regional medical officer could call a patient to him during the daytime, because he was on the sick fund and not at work. But in the case of the insured person who required dentures he could only attend in the evening, and this created a problem which he trusted the department would inquire into. Some approved societies were not at all satisfied with the arrangement whereby a person suffering from anything connected with the eyes was sent automatically by the medical practitioner to the ophthalmic surgeon. They were not satisfied that the ophthalmic surgeon should have a fee of one guinea for giving advice that ought in some cases to be given at a very much cheaper rate. It would destroy the confidence of approved societies in the work of the medical profession if the panel doctor automatically referred an insured person to the ophthalmic surgeon, and a fee of a guinea had to be paid to the latter for his work. It was also stated—he did not know how far the statement was justified—that optical practitioners claimed from 100 to 300 per cent. profit on the spectacles they sold. At any rate, the Minister ought to give some attention to the charges that were being made. He would also do well to inquire into the charges made for surgical appliances to members of approved societies. The Labour Party welcomed any new projects with regard to research into diseases, or with the idea of giving higher and better education and greater facilities to medical practitioners to improve their knowledge for the benefit of the health of the community. But what they would like to know was the extent to which the Ministry of Health intended to back up those projects financially. National Health Insurance was proceeding smoothly, and the work was being performed, as far as he knew, by the medical profession as a whole very well indeed. But he would like to see the Minister doing something beyond merely paying away benefits. He should do something to aid research work, and they had surely reached a stage when a sum of money should be made available for that purpose.

Health Insurance and Preventive Medicine.

Lieut.-Colonel FREMANTLE said that so far as the fees of ophthalmic surgeons were concerned he was certain that such matters would be rightly arranged between the Ministry of Health on the one side and the medical profession on the other. The medical profession would be the first to back up the plea put forward by Mr. Davies for research. He would endorse any proposal for giving more help to the Medical Research Council, or to research generally, but it would be unfair not to mention that that research arose out of the National Health Insurance scheme. It was true that they should look beyond the relief which had been provided by that scheme. When they looked at the larger and wider object aimed at specifically in the Act—namely, the prevention of disease—it had to be admitted that the whole insurance scheme had been a dead failure; it had not resulted in the prevention of disease in any way, and it did not tend in that direction. It was only in so far as they might be able in future administration to correlate the system of the insurance scheme with that of preventive agencies throughout the country that they could hope for any marked improvement. Poverty was one of the three essential elements in the causation of ill-health; the other two were ignorance and carelessness. It was quite certain that grinding poverty was at the bottom of a large amount of ill-health at the present time. If they could do away with that poverty for which the individuals were really not responsible, as had been largely done by the Widows, Orphans, and Old Age Pension scheme, they were going a long way towards improving indirectly the health of the community. The supply of houses was still inadequate. By the middle of 1930, if they continued to build at the present rate, they would have the population housed on much the same conditions as in 1911, with some improvement. But in 1911 in England and Wales there were 3,200,000 persons living in overcrowded conditions, more than two to a room. That condition of overcrowding continued now. The conditions in certain parts of London were appalling, and they had to be tackled; they were no less difficult than the task of overcoming the mere lack of houses, but they had to take up the question. If they read the reports of medical officers of health throughout the country they would find that during the last ten years they had skimmed very lightly over the question of the dilapidated house. They had done so because when they had reported houses as not fit for habitation no action had been taken: the local authority did not dare to take action. He hoped that this question would be taken up with increasing energy

by the Ministry of Health as the number of houses built became more adequate. He also suggested that the Ministry at least once every five years should call for a housing survey by the medical officers throughout the country, not only of the individual areas, but also of areas grouped together under the county councils. Any idea that they had come to the end of the housing problem merely because they had such a fine record as the Minister of Health had put before them that day would be grossly misleading, and he hoped that they would continue to take an active part in trying to arrive at a solution of this seemingly interminable problem.

Use of Accumulated Funds.

Mr. BRIANT said that there were many directions in which he wished to see the accumulated balances of the approved societies used. Any medical man would support him in the statement that a very large number of women who died in childbirth, or who lived on with enfeebled constitutions, could be saved from death or ill-health if they had proper medical care and had certificated midwives to attend them. He would like to see these balances used to make definite provision for the proper nursing and care of women in that condition. In his experience a large number of men and women who had not recovered from the direct effects of illness returned to work before they were fit. This meant enfeebled constitutions, if it did not actually reduce their years of life. He thought in time some way might be devised by which every worker should have the opportunity of being sent away for at least a month on a doctor's certificate, and by which funds should be provided to keep the family in the condition in which they were kept while the wage-earner was fully employed. He wished to make it clear that as a layman weighing up the evidence he had long been convinced that on the whole vaccination was a preventive of small-pox, but he was bound to add that recently there had been some statements which were at least disconcerting, particularly with regard to the possible connexion between encephalitis and inoculation. He was not satisfied that they were getting all the facts. If anything would deter people from vaccination it was a doubt as to what effects it might produce in their children. He understood that the Andrewes Committee made a report which was in the hands of some French people and had been published by them, but had never been submitted to the English public. That report ought to be made public here. They had a right not to wait for the result of the inquiry which was now being held, but to ask for some preliminary report from the Committee giving information as to the cases of encephalitis which had occurred within a period of two months after vaccination. He was disturbed the other day when the Minister of Health in answer to a question said he saw no reason why the report of his own medical officer with regard to the conditions in the hop districts should be issued. He (Mr. Briant) had visited the hopfields, and some of the conditions were disgusting and almost beyond belief. He hoped that the Minister would be able to give some more information on this subject. He hoped that whatever the Ministry might do in the way of research they would do it thoroughly. He hoped that they would not spare money in this matter, for if they could save the health of a single person the community would get the money back in a few years' time. He had every confidence in the Minister who was keen on these subjects himself, and he hoped that the right hon. gentleman would give some encouragement to those who felt that the opportunities for good of the Ministry of Health were probably unequalled by any other Ministry.

Small-pox Difficulties.

Dr. VERNON DAVIES said that the impression which he had gained from the speech of the Minister was that the outlook in regard to cancer was very much better than it had been, and that the right hon. gentleman almost ventured to prophesy that within a more or less reasonable time they would have a cure for that disease. They hoped that that was so, but he thought that it was much too strong a statement to go forth to the public at the present time. Very good work was being and had been done, but at present it must be emphasised again that the only chance for a patient with cancer was early and complete operation. He would like to ask some questions in regard to the post-graduate hospital. Most of the London hospitals and many provincial hospitals had post-graduate students. Was the new hospital going to become a State hospital for post-graduate study, not confined to medical men in this country, but open to medical men of all nations? Would a fee be charged to these medical men? That was rather an important point, because one would like to know whether it was the beginning of the State control of medicine or of a State medical service, or if it was simply the State helping medical men to provide facilities at a low cost to themselves. They had such facilities at the present time provided they were willing to pay for them at most of the London and provincial hospitals. During the year ended April 2nd last there had been 12,922 cases of small-pox notified in this country; the deaths registered during the year ended March 31st from small-pox were 33; this year there had been so far 28 deaths, 21 of unvaccinated people and 7 of people vaccinated in infancy; in the county of Durham there were 20 cases of small-pox in 1924, 1138 cases in 1925, and 6645 cases in 1926. There were also 9 cases in Hendon, of which 5 were fatal. These figures showed that small-pox had been definitely increasing in this country in the last few years from 2504 cases in 1923 to 12,922 in the year ended April 2nd, 1927, and there had been a steady increase in the death-rate from this disease. In 1914 there were 4 deaths; in 1915, 13 deaths; in 1916, 18 deaths; in 1921, 5 deaths; in 1922, 27 deaths; in 1923, 7 deaths; in the year ended March 31st, 1927, 33 deaths; and this year so far there had been 28 deaths. One also found that in 1924 there was an outbreak of small-pox in 148 separate districts in this country. That meant that we were gradually but surely advancing towards an epidemic of small-pox. Fortunately the disease had been of an exceedingly mild type, but that had made it much more difficult for the local authorities to deal with the earlier cases and to prevent the spread of the disease. He thought that the Minister of Health had a very definite responsibility in this matter, and he suggested that the Ministry were not adequately carrying out the powers conferred upon them in dealing with this danger. The Minister by his control over boards of guardians and other local authorities in health matters had a very definite power, both moral and financial. In 1924 there were only 47·5 per cent. of successful vaccinations, 37·1 per cent. of conscientious objectors, 5·4 per cent. died unvaccinated, and 0·2 per cent. were insusceptible. There was a balance of 10 per cent. unaccounted for. This 10 per cent. probably consisted of children who had escaped the meshes of the vaccination officer. They might as well put the matter quite plainly, and he blamed the Minister for not seeing that the Vaccination Act was properly carried out. Under the Act of 1898 a conscientious objector was given a chance of declaring that he conscientiously believed that vaccination would be prejudicial to the health of his child, but it was made rather difficult, because he had to appear before two justices or a stipendiary magistrate or a metropolitan magistrate in order to get an exemption certificate. The result was that the number of exemptions kept fairly steady; but in 1907 a new Vaccination Act was passed which made the procedure much more simple for the conscientious objector. The result was that in 1908 63·2 per cent. of children were successfully vaccinated, but in 1914 the figure had come down to 44·6 per cent. and in 1922 it was 40·3 per cent. One point to be noted in connexion with the statistics was that when small-pox occurred there was a larger number of successful vaccinations, but a year or two after people became less frightened and did not bother. He entirely disbelieved in these conscientious objections. In very few cases were they real. He found very often in his practice that parents who had originally stated that they had a conscientious objection were quite willing to have their children vaccinated when they wanted to emigrate to America. In a way he did not regret the attitude of certain people to vaccination because some people were so bigoted against vaccination that the only thing that would cure them was a big epidemic of small-pox with a high fatality-rate. It was a terrible thing to expect but so far as he could see it was bound to come. When the Minister found from his own statistics that things were not being properly carried out it was his bounden duty to put the law into operation and to exert pressure on the boards of guardians and local authorities. He would draw attention to some remarks in the report of the Chief Medical Officer of Health for 1925–26:—

"It is regrettable to have to record that the spread of the disease in the north-east counties was due to some extent to the failure of two sanitary authorities and their medical officers of health to take adequate steps to control the disease within that district."

Had those medical officers of health been reprimanded or dismissed? Again, had anything been done in regard to these cases:—

"One ill-administered district in the Tyneside area caused the malady to spread into eight other districts in the vicinity."

"Delay in the removal to hospital of a considerable number of cases inevitably led to the spread of the disease from the patients left at home."

If the medical officers in certain districts were neglecting their work, because that was what it came to, the Minister of Health, seeing that he paid half the salary of those officers, ought to take steps to regulate the situation. He was speaking against his own profession, but no medical man had a right to undertake definite responsibilities affecting the health of the community unless he discharged his duty to the best of his ability. He recognised that in certain cases medical officers had to deal with recalcitrant local authorities or boards of guardians, but at the same time they had a definite responsibility to the community. He had suggested that Government lymph should be sold to all practitioners who desired it, because it was very pure and undoubtedly

the best lymph in the country. It was very successful, because in 1924 there was a case success of 99 per cent. with primary vaccinations, which was a very high percentage. His experience in practice was that it was impossible to get lymph from any firm which was comparable in any degree to Government lymph. When he became a public vaccinator and started to use Government lymph he got magnificent results with all his public cases, practically speaking never having a failure. In a short time he found his private patients coming and saying that they would rather be vaccinated with Government lymph. Vaccination was the only remedy for small-pox. It had the overwhelming support of the medical profession throughout the world. We showed ourselves the weakest country in the world in allowing conscientious objections. The sooner the people of this country realised that under strict antiseptic precautions that there was practically no danger in vaccination, but that on the contrary it would prevent small-pox, the sooner would this country get back to the happy state of affairs which existed some years ago when small-pox was practically wiped out from our midst.

Problem of the Rheumatic Child.

Dr. DRUMMOND SHIELS said that while he thought it was true to say that the medical profession as a whole still believed very strongly in the efficacy of vaccination, he also thought that there was some change of opinion in regard to infant vaccination. He had come to the conclusion seriously that the time was ripe for another inquiry into vaccination law. In some respects there was considerable laxity, enforcement was not easy, and he thought that most medical men would welcome another impartial inquiry so that the vaccination laws might be put upon a modern and proper footing. The special subject to which he wished to draw the attention of the Committee was that of the rheumatic child. This matter had been an anxiety to the medical profession for many years and recently active steps had been taken to grapple with the problem. The British Medical Association set up an expert committee in 1924, and this committee had issued two reports. The Medical Research Council had also been studying the subject and had investigated conditions in London and Glasgow. That Council had also published an interesting report. Sir George Newman and many medical officers of health had repeatedly called attention to the ravages of this disease and to its very important social and economical effects. Acute rheumatism or rheumatic fever in children was followed in a large number of cases by heart disease which, if it did not end fatally, might leave the child more or less incapacitated for the ordinary occupations of life. While there were no figures covering the whole country, it had been shown that in particular areas 10 to 15 per cent. of the children at 12 years of age were affected with rheumatism. Therefore the number in the country as a whole must be very large. It was a tragic spectacle to see these children come to adolescence carry on at ordinary work and then break down and have to go into hospital. From hospital they went back to work again, and the same process was repeated, and unless they were fortunate enough to get a very long rest, or had a very light occupation, this ended in early death. The prevention of the disease was, of course, of the first importance. Unfortunately the specific organism had not yet been discovered. Frequently the condition was associated with sore-throat, adenoids, and enlarged tonsils, and ample facilities for the treatment of these conditions were very desirable. It seemed that environment had the main effect in this disease. It rarely attacked the children of the well-to-do, and its incidence was almost entirely on poor children. The very poorest children, strange to say, did not suffer nearly so much as the class immediately above, probably because in the very humblest sections of the people there was a very drastic system of the survival of the fittest, and those who survived had a very great capacity of resistance. There was no definite feature of the environment which one could say was really the main cause of the disease. The question of housing, especially the dampness of houses, school conditions, and many other things had been investigated, but there had been nothing very definite discovered with regard to particular items of environment. There was also no convincing evidence of heredity in connexion with this disease, the similarity of environment and contagion accounting for the cases which appeared to suggest heredity as a factor. He trusted that the Minister would encourage the Medical Research Council to go forward with research into this disease, for until they discovered the specific cause they would not be able to have effective prevention, which was what they most sought. Until they had that prevention they must make all necessary arrangements for dealing with those who actually had the disease. Not only were medical men and those bodies he had mentioned taking a keen interest in this matter, but he was glad to notice that London was giving a very good lead to the country. He thought it was to the credit of the London County Council and the Metropolitan Asylums Board that they had given this lead to the whole country by the provision of special hospital accommodation for cases of acute rheumatism. The London County Council, when deciding this matter, had 1500 cases of children absent from school on account of these rheumatic conditions. They had conferences with the Metropolitan Asylums Board and the Ministry of Health, and the latter first sanctioned the provision of 60 beds, then 16, and he understood that 350 more were at present being arranged for at Carshalton. It was estimated that no less than 10,000 children in London were suffering from these conditions, and that implied 25 per cent. of chronic invalidity. Surely it was only humane and wise to deal with this matter as the London County Council were dealing with it.

Special Rest Homes.

This disease could only be effectively dealt with by establishing the special rest homes which the Council were setting up, because the interesting point about this condition was that when it arose if sufficient rest was available, and the child was not hurried back into activity prematurely, there was an excellent chance of its escaping the development of heart disease, and the consequent permanent incapacity. While this was the position in London, he would like to ask the Ministry of Health what was the position in the provinces. Were the local authorities being urged to provide similar treatment? Many local authorities had not the facilities or the accommodation except in connexion with isolation hospitals, which were not particularly suitable for this purpose. Many of them had no money to spend in providing new accommodation, and a large number of these cases had to be treated throughout the provinces in voluntary hospitals, either those for sick children or general hospitals. A few years ago the Ministry granted £500,000 to voluntary hospitals. While they awaited some satisfactory method of dealing with voluntary hospitals he would like to know if the Minister of Health had considered, or would be prepared to do so, the giving of a grant earmarked for these cases to enable the provincial hospitals to provide extra accommodation of this special kind? It could not be too often emphasised that the percentage of cases developing heart disease could be greatly reduced. There were good authorities who declared that at present 50 per cent. of cases of acute rheumatism in children developed heart disease, and that figure must be greatly brought down. Another suggestion had been made that this disease should be made notifiable. It was well-known that in all matters of research statistics were most important, and these particulars were difficult to get unless the diseases were notifiable. Hospitals should arrange with local medical practitioners for the after-care of these children when they left hospital. He would like to see this subject linked up with the orthopædic treatment of children. In this matter the Minister of Health had been coöperating with county and county borough authorities. The treatment of orthopædic cases was that of those who were externally disabled, while the acute rheumatic children were correspondingly internally disabled. It had been estimated by the best orthopædic authorities—they must pay a tribute to Sir Robert Jones for the work which he had done on this subject—that 85 per cent. of these disabled children, many of whom were put into cripples' homes and stayed there all their lives or languished at home, a burden to themselves and to the community, could be rendered capable of self-support if taken in hand soon enough and given the wonderful surgical treatment which was now available from orthopædic surgeons. He would also like to say a word or two in regard to maternal mortality. It was certainly a very difficult problem, and it was not altogether easy to understand why the figures remained as they did. He thought they must agree, however, that the prenatal condition of the mother had a great deal to do not only with the maternal mortality but with the infantile mortality. The larger individual causes of infantile mortality were premature birth and congenital debility. Greater attention to the antenatal condition of the mother, and especially to seeing that she had adequate nourishment, would almost certainly help to diminish maternal mortality. They had managed to reduce practically all other mortality figures so much that it was unfortunate that on this one point they seemed to have failed. They had not yet got the whole reasons, though they knew many of the contributory causes. In regard to cancer he would like to ask the Minister what he thought about publicity. Some local authorities in this country—and in America this has been done to a very great extent—had launched a publicity campaign pointing out to their citizens the early symptoms of cancer and telling them in simple language what were the first signs, and emphasising the ease with which a cure can be secured if early treatment is sought. Some people said that it would spread a fear of cancer and do more harm than good, but that was not the belief of the surgeons, or of the people who were most in contact with this disease, and it had not been the experience of the local authorities when it had been tried. It was very desirable that this

country should make, as it was able to make, a good contribution to the international common pool of health activity at Geneva, because they had amidst all the other rivalries of the nations and the sordid competitions of the different peoples this noble rivalry and competition—the rivalry to contribute the most possible to the store of knowledge of the laws of health.

After further debate,

Sir KINGSLEY WOOD (Parliamentary Secretary to the Ministry of Health) said that he had not time that night to reply to the many interesting points raised in the debate. He wished to make one observation on the hospital for post-graduate medical education, because he did not want Dr. Davies, who he knew had great influence, or any other member, to think that there was any foundation for the idea that this was to be a State institution. As a matter of fact the institution was already acting under the auspices of a committee of which the President of the Royal College of Surgeons, the President of the Royal College of Physicians, the representatives of the chief medical schools, and leading members of the medical profession like Lord Dawson, were members. This institution would be in the same position as the others, and there was no intention to start a State institution of the kind.

The further discussion of the vote was adjourned.

Committee on Solicitation Laws.

Viscountess ASTOR asked the Secretary of State for the Home Department if the promised committee of inquiry on the Solicitation Laws had yet been appointed.—Capt. HACKING (Under Secretary for the Home Office) replied: It is proposed that the terms of reference of this committee shall be to inquire into the law and practice regarding offences against the criminal law in connexion with prostitution and solicitation for immoral purposes in streets and public places and other similar offences against decency and good order, and to report what changes (if any) are in their opinion desirable. My right hon. friend hopes to complete at an early date the selection of members to serve on this committee.

THURSDAY, JUNE 30TH.

Vaccination Leaflets in Schools.

Mr. GROVES asked the President of the Board of Education whether his attention had been called to the action of the local education authority in Monmouthshire in distributing a four-page leaflet, printed and published by an insurance company, advocating vaccination in the local schools, and whether, in view of the fact that propaganda on controversial subjects had not been allowed by the Board to be introduced into the schools which received Government grants, he would instruct the local authority to refrain from circulating leaflets of this nature.—Lord EUSTACE PERCY replied: I am in communication with the local authority in regard to this matter.

Stagnant Pools and Mosquito Breeding.

Mr. DAY asked the Minister of Health whether, in view of the inconvenience and annoyance suffered by the public through certain ditches in the country becoming silted up and overgrown, causing a breeding place for mosquitoes and other insects, he will give instructions to all local authorities and owners of land containing such stagnant pools to be compelled under the Public Health Act to have these places cleaned out and sprayed with an adequate insecticide.—Mr. CHAMBERLAIN replied: I have no authority to give such instructions. Under Section 91 of the Public Health Act, 1875, any pool, ditch, &c., in such a state as to be a nuisance or injurious to health is to be deemed a nuisance liable to be dealt with under the Act. The question whether any particular pool is a nuisance is one of fact to be determined by the court in any proceedings instituted under the Section.

Model By-Laws for Hop-Picking Areas.

Mr. BRIANT asked the Minister of Health how many district councils had adopted the model by-laws issued early in 1926 for the better regulation of hop-picking areas.—Mr. CHAMBERLAIN replied: Eleven councils have made by-laws based on the new model.

Quarantine for Imported Dogs.

Lord APSLEY asked the Minister of Agriculture whether, seeing that the maximum period of incubation of any disease, including rabies, in dogs was two months, he would consider the reduction of the present period of six months' quarantine in certain establishments approved by his department of dogs taken from England, but brought back by their owners, on the ground that many of the latter could not, owing to financial circumstances, afford to pay the necessary charges for this period.—Mr. GUINNESS replied: My noble friend is in error as to the maximum incubation period of rabies, as dogs from abroad have developed rabies from three to five and a half months after they have arrived at quarantine stations in this country. I do not consider that inability to pay the necessary quarantine charges would justify me in reducing the period of quarantine and thereby adding very considerably to the risk of the introduction of such a terrible disease into this country.

Insanitary Slums in Glasgow.

Mr. ERNEST BROWN asked the Secretary of State for Scotland if his attention had been drawn to the Eighth Annual Report of the Scottish Board of Health, and, in particular, to Chapter 2, paragraph 16, as to the insanitary condition in Glasgow slums, and if any action had been taken on this report or, if not, if the Board of Health contemplated immediate action to deal with these conditions.—Sir JOHN GILMOUR replied: I am aware of the terms of the paragraph in question. As indicated therein it is a quotation from the report of the Commissioner appointed by the Scottish Board of Health to inquire into an improvement scheme submitted by the corporation of Glasgow under Part II. of the Housing (Scotland) Act, 1925. Details of the corporation's proposals for dealing with the areas to which the Commissioner's report refers will be found in paragraph 15 of the report. The improvement scheme has now been confirmed by the Board, and the local authority are in course of carrying out its provisions, which include the demolition and clearing away of the insanitary properties and the provision of new dwellings to rehouse the dispossessed tenants.

FRIDAY, JULY 1ST.

Ex-Service Men and Medical Treatment.

Mr. DAY asked the Minister of Pensions how many wounded men were still undergoing treatment as a result of the late war.—Major TRYON replied: The number of men suffering from wounds or injuries, as distinct from other classes of disability, who may be undergoing treatment are not separately recorded, but I may say that at the end of May 5000 officers and men were in receipt of surgical treatment of one kind or another.

MONDAY, JULY 4TH.

Colonial Scientific Research.

Captain CROOKSHANK asked the Secretary of State for the Colonies whether any action was being taken towards creating a single Colonial scientific and research service, as recommended in the report submitted by Lord Lovat and his colleagues to the recent Colonial Office conference.—Mr. AMERY replied: As my hon. and gallant friend will recollect, the committee of the Colonial Office Conference, over which Lord Lovat presided, while recommending the ultimate creation of a single colonial research service, recognised that the natural method of growth of such a service was the organisation, in the first instance, of workers in the various fields of science into separate services. I have already appointed a committee in accordance with the recommendation referred to by my hon. and gallant friend to formulate practical proposals, for submission to Colonial Governments, to give effect to the resolution of the Colonial Office Conference, on the subject of a Colonial agricultural research service, and it is proposed that the recently appointed Colonial Medical Research Committee should, as one of its first tasks, consider the organisation of a Colonial medical research service. I may also say that steps are now being taken to set up another committee to inquire into the present condition of the Colonial veterinary services. This committee will no doubt consider the possibility of establishing a veterinary research service common to all the colonies, protectorates, &c. As regards forestry, I propose to defer consideration of the question of constituting a Colonial forestry research service until after the meeting of the Empire Forestry Conference, to be held at Melbourne in 1928.

Illicit Importation of Drugs.

Sir ROBERT THOMAS asked the Secretary of State for the Home Department whether the illicit importation of drugs into this country had increased since the war; from what countries they were principally introduced; and whether there had been any recent arrests for this offence.—Sir W. JOYNSON-HICKS replied: No, Sir. While it is not possible to speak positively in a matter of this kind, all our experience goes to show that the illicit importation of dangerous drugs has diminished since the passing of the Dangerous Drugs Act of 1920. No arrest of any importance has been made this year. I shall be happy to send the hon. Member—as soon as it is available—a copy of the report made by His Majesty's Government to the League of Nations on the control of the drug traffic in respect of 1926, which contains a table giving particulars of all cases during the year in which seizures were made.

Indian Medical Service.

Sir RICHARD LUCE asked the Under Secretary of State for India how many European and how many Indian medical officers, respectively, had entered and retired from the

Indian Medical Service in each of the years 1923, 1924, 1925, 1926, and 1927; what was the total number of each category now serving; and what was the proportion of Europeans to Indians that was considered requisite for the satisfactory working of the service in the military and civil branches, respectively.—Earl WINTERTON replied: The table below shows the recruitment of, and casualties among, permanent officers of the Indian Medical Service during the years 1923–27.

Year.	Recruitment.		Casualties from all causes—i.e., retirements on pension, deaths, removals, and resignations.	
	European.	Indian.	European.	Indian.
1923	17	—	41	4
1924	21	—	17	1
1925	11	10	31	1
1926	12	3	29	3
1927 to date	12	2	16	1

According to the latest Army list there are now 489 British and 158 Indian officers holding permanent commissions in the Indian Medical Service. The ratio of approximately one Indian to two European officers has been accepted for both the civil and the military sides of the Indian Medical Service.

INFECTIOUS DISEASE IN ENGLAND AND WALES DURING THE WEEK ENDED JUNE 25TH, 1927.

Notifications.—The following cases of infectious disease were notified during the week:—Small-pox, 259 (last week 219); scarlet fever, 1553; diphtheria, 725; enteric fever, 95; pneumonia, 913; puerperal fever, 42; puerperal pyrexia, 115; cerebro-spinal fever, 4; acute poliomyelitis, 6; acute polioencephalitis, 1; encephalitis lethargica, 33; dysentery, 2; ophthalmia neonatorum, 109. There were no cases of cholera, plague, or typhus fever notified during the week.

Cases of small-pox were notified from the counties of Derby 4 (Derby C.B.), Durham 126, Lancaster 16, Northampton 1 (Northampton C.B.), Northumberland 19, Stafford 7 (Burton-on-Trent), Yorks, West Riding 39, Glamorgan 8 (Cardiff 2, Merthyr Tydfil 1, Gelligaer 5), and Monmouth 39. None was returned from London, Kent, Middlesex, Nottingham, Southampton, North Riding of Yorkshire, or the City of York.

Deaths.—In the aggregate of great towns, including London, there were no deaths from small-pox, 1 (0) from enteric fever, 30 (1) from measles, 4 (0) from scarlet fever, 19 (8) from whooping-cough, 17 (4) from diphtheria, 39 (3) from diarrhœa and enteritis under two years, and 33 (3) from influenza. The figures in parentheses are those for London itself.

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THE Index and Title-page to Vol. I., 1927, which was completed with the issue of June 25th, is now in preparation. A copy will be sent gratis to subscribers on receipt of a post-card addressed to the Manager of THE LANCET, 1, Bedford-street, Strand, W.C. 2. Subscribers who have not already indicated their desire to receive Indexes regularly as published should do so now.

A CENTRAL CRIPPLES' HOSPITAL FOR EDINBURGH.—Considerable progress was reported at a recent meeting in connexion with the £75,000 scheme for a Central Cripples' Hospital for Edinburgh and the south-eastern area of Scotland. At least 3000 more beds are required in the Scottish hospitals which are burdened with long waiting-lists, but should the present scheme mature, the crippled child will be assisted elsewhere and thus relieve the pressure on hospital beds. Sir David Wallace pointed out that not only the need existed for early surgical treatment, but also facilities for continuity of treatment.

Medical News.

UNIVERSITY OF OXFORD: *Schorstein Research Fellowship.*—The Board of the Faculty of Medicine has elected Jean Orr-Ewing, M.A., B.M., Lady Margaret Hall, to the Schorstein Research Fellowship in Medical Science for two years from Oct. 1st, 1927. Miss Orr-Ewing has been engaged in pathological research in the University for several years past, and intends to continue her investigations in the Sir William Dunn School of Pathology.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.—At an extraordinary meeting of the College held on June 14th it was decided, in celebration of the Lister centenary, to confer the Honorary Fellowship of the College upon the Earl of Balfour; Sir John Rose Bradford, P.R.C.P. Lond., F.R.S.; Sir Hector Cameron; Mr. Neville Chamberlain, Minister of Health; Sir William Watson Cheyne; Sir David Ferrier, F.R.S.; Sir John Gilmour, Secretary for Scotland; Dr. Thorvald Madsen, Director of the Statens Seruminstitut at Copenhagen; and Dr. Arthur Logan Turner, P.R.C.S. Edin.

UNIVERSITY OF BIRMINGHAM.—At recent examinations the following have been successful:—

L.D.S.—C. T. Morgan, A. H. Bosworth, S. L. Barnacle, W. H. Brown, W. L. Eccleston, B. H. Johnson, R. E. Morgan, G. Simons, A. T. Wynne.

UNIVERSITY OF SHEFFIELD.—At the undermentioned examinations held recently in the Faculty of Medicine the following candidates were successful:—

M.D.—Harry N. Green.

Final M.B., Ch.B.—With Honours: Class II., William L. Rowe. Ordinary: Dorothy Brown, Bernard Graham, Donald H. Lockwood, Philip G. Preston, and William G. P. Wells.

UNIVERSITY OF DUBLIN: SCHOOL OF PHYSIC, TRINITY COLLEGE.—At recent examinations the following candidates were successful:—

FINAL MEDICAL EXAMINATION.

Part I., Materia Medica and Therapeutics; Medical Jurisprudence and Hygiene; Pathology and Bacteriology.—*Frederick G. Stewart, Nora A. Stack, John Beggs, Josephine M. Enright, Marie M. E. Lea-Wilson, Louis L. Griffiths, Everest S. Adderley, Eric F. St. J. Lyburn, Patrick O'Shea, Geoffrey B. Thrift, William A. Y. Knight, John Willoughby, Eric C. Hicks, and John T. M'Ginn.

Part II., Medicine.—*Terence J. Millin, Solomon Behr, Robert R. Woods, Thomas C. M. Corbet, Gilbert M. Smith, Paul M. Garry, Thomas J. O'Reilly, Joseph A. K. FitzGerald, Richard M. Moore, George M'Donald, Lenox R. S. MacFarlane, Ethel M. Weir, Isidore Isaacson, John K. Harper, William P. Culbertson, Arthur R. Gray, Claud E. G. Nunns, and Izaak le Roux.

Surgery.—*Terence J. Millin, Thomas C. M. Corbet, Wilfred F. Lane, Robert A. Q. O'Meara, Maurice F. N. Griffin, Robert S. F. Hennessey, Maximilian Gerber, Thomas J. O'Reilly, Norah W. Brown, Myer Hoffman, Robert D. Whiteacre, Patrick Brangan, Charles L. Day, Norman J. U. Mather, George Q. Chance, Donal B. O'Sullivan-Beare, Samuel R. Elmes, Shirley D. K. Roberts, Ralph W. T. H. Stewart, Cecil F. Cope, Desmond Blewitt, John O. Bennett, Samuel B. Dalrymple, Edward M. Gamble, Hubert C. Weir, Lenox R. S. MacFarlane, William P. Culbertson, Norah E. Fenton, James J. FitzGerald, and Joseph A. K. FitzGerald.

Midwifery.—*William J. E. Jessop, *Evan K. Malone, *Kenneth Watson, David M'M. Carson, Ernest du Plessis Meiring, John J. O'Dwyer, Denis S. P. Wilson, Robert D. Whiteacre, Leslie R. H. Keatinge, and Nathaniel Burstein.

FINAL DENTAL EXAMINATION.

Dental Surgery and Pathology; Dental Mechanics and Metallurgy; Orthodontics.—Andrew A. Gardner, Thomas J. L. Stafford, and Gertrude G. Hill.

* Passed on high marks.

UNIVERSITY OF DURHAM.—At a convocation held in Durham on June 28th Sir James Berry received the degree of D.C.L. Honoris Causa. He was presented by Mr. G. Grey Turner, who has been recently appointed to the Chair of Surgery.

Other recent appointments at the College of Medicine, Newcastle, are as follows:—Sir Thomas Oliver: Emeritus Professor of Medicine. Prof. H. Brunton Angus: Emeritus Professor of Surgery. Dr. Thomas Beattie: Professor of Medicine.

MINERS' CONVALESCENT HOME.—On June 28th the Prince of Wales formally opened the Lancashire and Cheshire Miners' Convalescent Home at Bispham, a northern suburb of Blackpool. The home was built with part of the proceeds of the Miners' Welfare Fund, and cost about £150,000.

UNIVERSITY OF GLASGOW.—The Harry Stewart Hutchison prize of £50 for writings embodying original research work in a branch of medical science relating to children has been awarded to Dr. Robert Cruickshank for an essay on the Intestinal Flora of Infants and Young Children in Health and Disease. The Macewen medal in surgery has been awarded to Dr. Marion W. Gray.—On July 1st the degree of M.D. was conferred on Thomas Walter Hill for a thesis on the Significance of Caloric Labyrinthine Stimulation in the Diagnosis, Prognosis, and Treatment of Certain Pathological Conditions.

SHANTUNG CHRISTIAN UNIVERSITY, TSINAN-FU, CHINA.—Dr. Harold Balme, who has been President of the University since 1921, has, for family reasons, resigned his position. Dr. Balme went to China as a medical missionary in 1906, and became professor of surgery at Shantung University in 1912. He has been chairman of the Council on Medical Education of the China Medical Missionary Association, and was first President of the China Association for Christian Higher Education. He was also vice-chairman of the National Christian Council of China, and the author of "China and Modern Medicine," and other books. His resignation was accepted by the British section of the Board of Governors with great regret.

MEDICAL SOCIETY FOR THE STUDY OF VENEREAL DISEASES.—The annual general meeting of this society will be held at 11, Chandos-street, London, W., on Friday, July 15th, at 8.30 P.M., when Dr. D. Nabarro will read a paper on Some Problems Associated with the Transmission of Syphilis to the Second and Third Generation. A discussion will follow.

SOCIETY OF SUPERINTENDENTS OF TUBERCULOSIS INSTITUTIONS.—An American meeting of this society will be held at the house of the British Medical Association, Tavistock-square, on July 11th, at 3 P.M., when a discussion will take place on the possibility of closer coöperation between the society and fellow-workers on the American continent. Dr. Eugene L. Opie, of the Henry Phipps Institute, Philadelphia, will read a paper on Latent Tuberculosis and its Relation to Manifest Disease, and Dr. H. Longstreet Taylor, President of the National Association for the Prevention of Tuberculosis in America, will give a lantern demonstration on Sanatorium Treatment in Cold Climates.

SOCIETY FOR THE PREVENTION OF VENEREAL DISEASE.—The eighth annual general meeting of this society was held at 143, Harley-street, London, W., on June 28th, Sir Basil Peto, M.P., President, being in the chair. The following resolution was carried unanimously:—

"That this meeting desires to call the attention of the Minister of Health and the public to the facts:—

"(1) That recently a man was sentenced in Manchester to six weeks' imprisonment for selling printed information similar to that distributed by this Society.

"(2) That the man had sold similar printed information in other districts without prosecution and with the unofficial approval of medical officers of health and military commanding officers.

"(3) That the information supplied by this man was similar to that which is quite legally distributed by certain local authorities.

"(4) That the methods of prevention described were those which have been officially taught and successfully practised in the Navy, Army, and elsewhere.

"(5) That the above facts illustrate the present contradictory and deplorable legal position.

"(6) That in view of the prevalence of venereal disease and its disastrous results on national efficiency and the great cost of the present method of dealing with it only by curative and not preventative methods, as well as of the above facts the Society for the Prevention of Venereal Disease calls upon the Ministry of Health to amend the Venereal Disease Act, 1917, so as to give effect to the recommendation contained in Clause 14 of the Report of the Departmental Committee of Inquiry held under the chairmanship of Lord Trevethin in 1923,

"'That the law should be altered so as to permit properly qualified chemists to sell *ad hoc* disinfectants provided such disinfectants are sold in a form approved and with instructions for use approved by some competent authority.'"

Dr. J. H. Sequeira stated his belief that there was at the present time an increase in venereal disease, due, in his opinion, to the fact that a post-war generation had arisen which had not received instruction in disinfection. Sir James Crichton-Browne said that Great Britain, although maintaining her position in preventive medicine generally, was falling behind the other nations of the world in regard to the prevention of venereal disease. He pointed out the remarkable position that the hon. secretary of the society was giving lectures to prisoners at one of the large prisons at the invitation of the prison authorities and imparting scientific information, while one of his audience might possibly be undergoing sentence in that very prison for imparting similar information in leaflet form to the public outside.

THE King has confirmed the appointment of Dr. N. L. Clarke as a nominated unofficial member of the Legislative Council of the Straits Settlements.

NEW PATHOLOGICAL LABORATORY AND RESEARCH INSTITUTE.—On Tuesday, July 19th, at 3 P.M., Mr. Neville Chamberlain, Minister of Health, will open the new pathological laboratory and research institute which is a gift to the City of London Hospital for Diseases of the Heart and Lungs, Victoria-park, E. 2, from the Prudential Assurance Company. The ceremony will be succeeded by a garden party to meet the Lady Maud Carnegie, President of the Ladies' Association of the hospital.

BRITISH PATHOLOGISTS' ASSOCIATION.—The summer meeting will be held in London on July 15th, beginning at 10 A.M., at the National Hospital, Queen-square, when the following papers will be given:—Dr. J. G. Greenfield: The Clinical Pathology of the Cerebro-Spinal Fluid; Dr. F. B. Smith: Significance of the Relationship of Total Chlorides and Free Acid in Gastric Contents; Dr. A. Renshaw: The Economics of Laboratory Administration; Dr. S. C. Dyke: The Determination of Compatibility in Blood Donors; Dr. E. Wordley: Observations on Fibro-Sarcomata of Bone with Illustrative Specimens; Dr. A. D. Fraser: Endometriomata with Illustrative Specimens. In the afternoon demonstrations at the Pathological Laboratory, National Hospital, will be given by Dr. J. G. Greenfield, Mr. Anderson, and Dr. G. Hadfield; and at the Hospital for Sick Children, Great Ormond-street by Dr. D. Nabarro, Dr. D. McClean, Dr. W. W. Payne, and Dr. H. Archer. At 5 P.M. a general meeting will be held at the B.M.A. House, Tavistock-square, Dr. C. Powell White presiding, when a discussion on Progress and Future Policy will be opened by the Chairman and Dr. J. G. Greenfield. At 6.15 P.M. at the same place Sir Thomas Horder will give an address on the Need of Standardisation in Clinical Pathology.

SOCIETY OF BRITISH NEUROLOGICAL SURGEONS.—The second meeting of this newly formed society was held in Manchester on June 24th and 25th, under the Presidency of Sir Charles Ballance. The recently elected associate members were admitted by the President. In addition to a full attendance of members and associates Prof. Harvey Cushing was present and took part in the discussions. On the first morning Mr. Geoffrey Jefferson operated upon a case of neuralgia, dividing the sensory root of the Gasserian ganglion, and then exhibited a number of cases as a basis of general discussion. In the afternoon Prof. Shaw Dunn made some observations on a series of intracranial aneurysms, pointing out how commonly they were the cause of fatal intradural (subarachnoid) hæmorrhage. But he insisted that unless they were carefully searched for and the clot faithfully removed they were very apt to be overlooked. Mr. Wilfred Trotter followed by giving his reflections on the surgical treatment of some of the larger intracranial aneurysms, which were, he said, not uncommon and were being recognised clinically rather more often than formerly. Mr. Percy Sargent read a paper on two cases of angioma of the pia arachnoid cerebri, giving an account of the clinical findings in his cases, the operative appearances, and the after-histories. He discussed the difficult question of correct pathological grouping, and Prof. Dunn described the histology of a case he had met with. Dr. N. D. Royle gave an address, based on a series of cinematograph films, on the effects of sympathetic ramisectomy in cases of spastic paralysis. In many of these a striking improvement was apparent, but it was suggested that similar results could be obtained by older-established orthopædic measures. Dr. Royle thought that much more rapid improvement took place after ramisectomy, and declared that unless vascular changes were noted in the limb after operation it could not be held that a proper sympathectomy had been performed. On the morning of June 25th, after Dr. Stewart had described briefly his work on the innervation of the teeth, Dr. Arthur Hall gave an exposition of the reflexes controlling posture. He defined clearly the meaning of Magnus's nomenclature and illustrated several of the tonic reflexes by means of cinematograph films, models, and diagrams. Mr. Cecil Calvert gave an account of two cases of cerebral tumour, attempting to account for the localised pain, of which they had complained by reference to the innervation of the dura. Mr. Morris showed the anatomy of the Haertel method of injecting the Gasserian ganglion, and of a slight but important alteration in the site and traject of puncture. He believed that the injection material tended to run back into the root of the ganglion, and gave permanently satisfactory results. In discussion members mentioned the serious results which sometimes followed these injections, but Mr. Morris stated that he had not seen them, though transient palsy of the abducens sometimes occurred. Keratitis was rarely severe.

PRESCRIBING BY INSURANCE PRACTITIONERS.—At an emergency meeting of the executive committee of the Kent Local Medical and Panel Committees, held on June 29th at Canterbury, the proposed new agreement between the Ministry of Health and chemists as to prescribing by insurance practitioners was discussed. A resolution was passed to the effect: That the proposed arrangement which would make it possible and financially profitable for chemists to limit the quality and quantity of medicines prescribed for insured persons is contrary to public policy and must be resisted by every possible means.

MEMORIAL TO A MEDICAL MAN.—On June 29th the town of Blackpool honoured the memory of William Henry Cocker, L.S.A., M.R.C.S. Eng., J.P., the first Mayor and Honorary Freeman of the borough, when a memorial four-sided clock tower 85 feet in height was unveiled in the Stanley Park. Dr. Cocker was born in 1836 and died in 1911 at the age of 74. He was one of the pioneers of Blackpool who did much to found and establish the town as one of the most prominent seaside health resorts in the kingdom. He rendered eminent services to the municipality, was elected mayor on six occasions, and was a member of the town council for 36 years.

INSANITARY SCHOOL BUILDINGS IN IRELAND.—At a public meeting of national school teachers held at Naas, county Kildare, last week, attention was drawn by more than one speaker to the insanitary condition of many of the school buildings, and its ill-effect on the health of the pupils. One teacher stated that much of the ill-health of after years had its origin in the hovels which passed for school-rooms in so many parts of the country.

Many of those rooms, he said, were structurally unhygienic and dangerously insanitary. They were veritable death-traps. Many of them were built 70 or 80 years ago during the experimental stage of Irish primary education, when the science of hygiene was unknown in Ireland, and when the provision of a roof and walls was considered the acme of comfort. Bad as were the structural defects of some of the schools, their danger to health was insignificant compared with the situation and condition of the out-offices which violated not only the laws of health, but even the laws of common decency. Medical inspection of school-children, he held, would inevitably go far to remedy the existing state of affairs.

It is satisfactory to find, our correspondent remarks, that the teachers throughout the country are the most active in pressing for medical inspection of school-children to be carried out.

Medical Diary.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION, 1, Wimpole-street, W.

MONDAY, July 11th, to SATURDAY, July 16th.—FELLOWSHIP OF MEDICINE DEMONSTRATIONS. Tues., 2.30 P.M., at In-Patient Department, St. John's Hospital for Diseases of the Skin, Uxbridge-road, W. Demonstration by Dr. A. C. Roxburgh. Fri., 10 A.M., at Central London Throat, Nose, and Ear Hospital, demonstration by Mr. Archer Ryland. Those desirous of being present at this demonstration please notify hospital—Museum 1539. Fri., at 5 P.M., at Royal Westminster Ophthalmic Hospital, lecture, Epiphora, by Mr. G. Viner. These demonstrations are free to all members of the medical profession.—NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's Hospital, Tottenham, N.—Vacation Course—all day, 10.30 A.M. to 5.30 P.M. 4.30 P.M., lectures free to members of the Fellowship of Medicine.—ST. MARK'S HOSPITAL FOR DISEASES OF THE RECTUM, City-road, E.C. Special course in Proctology for one week.—PARK HOSPITAL, Hither Green, S.E. Course in Infectious Fevers. Wed., 2.30 P.M., and Sat., at 11 A.M.—WEST-END HOSPITAL FOR NERVOUS DISEASES, 73, Welbeck-street, W. Lecture-demonstrations at 5 P.M., daily throughout the month. Further information from the Secretary.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY, July 11th.—2.30 P.M. to 5 P.M., Medical, Surgical, and Gynæcological Clinics. Operations.

TUESDAY.—2.30 P.M., to 5 P.M. Medical, Surgical, Throat, Nose, and Ear Clinics. Operations.

WEDNESDAY.—2.30 P.M. to 5 P.M., Medical, Skin, and Eye Clinics. Operations.

THURSDAY.—11.30 A.M., Dental Clinic. 2.30 P.M. to 5 P.M., Medical, Surgical, and Ear, Nose and Throat Clinics. Operations.

FRIDAY.—10.30 A.M., Throat, Nose, and Ear Clinics. 2.30 P.M. to 5 P.M., Surgical, Medical, and Children's Diseases Clinics. Operations.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.

THURSDAY, July 14th.—4 P.M., Dr. Nabarro: Vaccine Therapy.

WEST LONDON HOSPITAL, POST-GRADUATE COLLEGE, Hammersmith, W.

MONDAY, July 11th.—10 A.M., Mr. MacDonald: Genito-Urinary Operations. 11 A.M., Mr. Tyrrell Gray: Surgical Wards. 2 P.M., Mr. Donald Armour: Operations.

TUESDAY.—10 A.M., Medical Registrar: Ward Demonstration. 2 P.M., Mr. Sinclair: Surgical Out-patients. 3 P.M., Dr. Pritchard: Medical Wards.

WEDNESDAY.—10 A.M., Dr. Owen: Medical Diseases of Children. 12.15 P.M., Dr. Burnford: Medical Pathology, 2 P.M., Mr. Gibb: Eye Department.

THURSDAY.—10 A.M., Dr. Grainger Stewart: Neurological Department. 2 P.M., Dr. Ironside: Medical Out-patients. 3 P.M., Sir Henry Simson: Gynæcological Ward.

FRIDAY.—10 A.M., Dr. Dowling: Skin Department. 2 P.M., Mr. Addison: Operations. Mr. Vlasto: Throat, Nose and Ear Department.

SATURDAY.—9.30 A.M., Dr. Burnford: Bacterial Therapy and Ward Visit. 10 A.M., Dr. Owen: Medical Diseases of Children.

Operations, Medical, Surgical, and Special Out-patients, daily, 10 A.M. to 5 P.M.; Saturdays, 10 A.M. to 1 P.M.

ROYAL NORTHERN HOSPITAL, Holloway-road, N.

TUESDAY, July 12th.—3.15 P.M., Mr. Kenneth M. Walker: Recent Advances in the Diagnosis and Treatment of Genito-Urinary Disease.

Appointments.

THOMPSON, A. G. G., M.D. Camb., D.P.H., has been appointed, Medical Officer for Lambeth.

London School of Dermatology, St. John's Hospital for Diseases of the Skin: DRAKE, J. A., M.D. Lond., and O'DONOVAN, W. J., M.D. Lond., Lecturers.

Manchester Royal Infirmary: LINFORD, H., M.B. Manch., Resident Junior Assistant House Surgeon (Central Branch); GRAY, E. D., M.B. Lond., Junior Assistant Medical Officer, Radiological Department; LEIGHT, A. T., M.B. Manch., Anæsthetist (Central Branch); SMIRK, F. H., M.D. Manch., Medical Registrar; LAMBERT, V. F., F.R.C.S. Edin., Assistant Surgical Officer Aural Department; ASHCROFT, G. V., M.D. Manch., M.R.C.P. Lond., D.P.H., Assistant Medical Officer.

Certifying Surgeons under the Factory and Workshop Acts: CAMERON, I. M., M.B., Ch.B. Edin. (Tarbert District of the County of Argyll); WIGFIELD, F. P., M.B., B.S. Durh. (Buntingford District of the County of Hertford.)

Vacancies.

For further information refer to the advertisement columns.

Bedford County Hospital.—Asst. H.S. £130.

Birmingham and Midland Eye Hospital, Church-street.—Physico-Therapist to Ultra-Violet Ray Dept. £100.

Bodmin, Cornwall County Mental Hospital.—Asst. M.O. £350.

Bradford, Royal Eye and Ear Hospital.—Res. H.S. £120.

Brighton, Royal Alexandra Hosp. for Sick Children.—H.P. £100.

Bristol Union.—Demonstrations in Pathology. £400.

Cardiff City Mental Hospital, Whitchurch, near Cardiff.—Second Asst. M.O. £350.

Central London Throat, Nose, and Ear Hospital, Gray's Inn-road, W.C.—Res. H.S. £75.

City of London Hospital for Diseases of the Heart, &c., Victoria Park, E.—H.P. At rate of £100.

Coventry and Warwickshire Hospital.—Hon. Asst. Surg.

Croydon County Borough.—Asst. M.O.H. and Asst. School M.O. £600.

Doncaster County Borough.—Asst. M.O.H. and Tub. O. £600.

Edinburgh University.—Chair of Medicine.

Evelina Hospital for Children, S.E.—Masseuse. £160. H.S. £120.

General Lying-in Hospital, York-road, Lambeth, S.E.—Registrar.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W.—H.P. £50 for six months.

Huddersfield Royal Infirmary.—Jun. H.S. £150.

Ilford Borough.—Chief Asst. M.O.H. £700.

Indian Medical Service.—Appointments.

Kensington Royal Borough Tuberculosis Dispensary.—Honorarium 35 guineas.

Kent Education Committee.—School M.O. £600.

Leeds City Sanatorium, Gateforth.—*Res.* M.O. £400.

Leeds General Infirmary.—Hon. Phys.

Manchester, Ancoats Hospital.—Pathological Registrar. At rate of £100. H.P. At rate of £100.

Manchester City.—Asst. Tuberculosis Officer. £650.

Manchester, St. Mary's Hospitals.—Two H.S.'s. Each at rate of £50.

Margate, Royal Sea Bathing Hospital.—Two H.S. At rate of £200.

Metropolitan Asylums Board.—Second Asst. M.O. £500. Jun. Asst. M.O. £500.

Miller General Hospital for South-East London, Greenwich-road, S.E.—Hon. Asst. Gynæcologist. Cas. O. £150. H.S. £125.

National Association for the Prevention of Tuberculosis.—Asst. Medical Commissioner. £700.

New Delhi, India, Lady Hardinge Medical College.—Clin. Pathologist. Rs.450 per mensem.

Port Talbot, Borough of.—M.O.H. and Sch. M.O. £800.

Royal Army Medical Corps.—Commissions.

Royal Free Hospital, Gray's Inn-road, W.C.—Hon. Anæsthetist. Also Cas. O. £150.
Royal Northern Hospital, Holloway, N.—Surg. to Ear, Nose, and Throat Dept. Also P.
Royal Waterloo Hospital for Children and Women.—Hon. Radiologist. Hon. Gynæcologist.
Samaritan Free Hospital for Women.—Hon. Surg.
Sheffield Royal Hospital.—Resident Anæsthetist. Res. Ophth. H.S. £80 each.
Sheffield Royal Infirmary.—Ophth. H.S. At rate of £80. Also Hon. Asst. Ophth. S.
Sunderland County Borough.—Asst. M.O. for Maternity and Child Welfare. £600.
Swansea County Borough.—Asst. M.O. £600.
West End Hospital for Nervous Diseases, Welbeck-street, W.—Hon. Reg.
West London Hospital, Hammersmith-road, W.—Res. Asst. S. £200.
Westminster Hospital.—Surg. Registrar. £150. Medical Registrar. £150.
Willesden General Hospital, Harlesden-road, N.W.—Phys. in Charge of Dept. for Dis. of Skin. Also H.S. At rate of £100.
Wolverhampton and Staffs Hospital.—H.S. At rate of £150. Also Hon. Surg.

The Chief Inspector of Factories announces vacancies for Certifying Factory Surgeons at Market Rasen (Lincolnshire), Bognor (Sussex); and at Aylesbury (Buckinghamshire).

Births, Marriages, and Deaths.

BIRTHS.

BESWICK.—On June 26th, at Goldsytch House, Mill Hill, N.W., the wife of Wilfrid Beswick, M.D., of a son.
DUCKWORTH.—On July 2nd, at South Parade, W., the wife of J. E. H. Duckworth, M.C., L.D.S. R.C.S., Eng., of a son.
GERARD-PEARSE.—On June 29th, at Somerset House, Weymouth, the wife of John Gerard-Pearse, F.R.C.S., of a son.
HUME.—On July 2nd, at 41, Southway, N.W. 11, the wife of J. Basil Hume, M.S., F.R.C.S., of a daughter.
MOODY.—On July 1st, at Bournemouth, the wife of Dr. A. J. Moody, of a daughter.

MARRIAGES.

CROOK—WILLMORE.—On June 27th, at St. Joseph's Church, Nympsfield, Glos., Bertram Austin Crook, M.B., Ch.B., M.R.C.S., L.R.C.P., of Paulton, Somerset, to Kathleen Marjorie Willmore, M.B., Ch.B., of Wotton-under-Edge.
GIBSON—ELLERTON.—On June 28th, at Holy Trinity, Sloane-street, Paul Currey Gibson, M.D., M.R.C.P., to Margaret, daughter of the Rev. F. G. Ellerton, Vicar of Tardebigge, and of Mrs. Ellerton.

DEATHS.

BRYAN.—On June 27th, at Fairfax-road, Chiswick, Edward Bryan, M.R.C.S., L.R.C.P., in his 85th year.
DAWSON.—On June 27th, at Queen-street, Edinburgh, James Walker Dawson, M.D., D.Sc., F.R.C.P.E. and F.R.C.S.E., aged 57.
DREAPER.—On June 28th, at the Royal Naval Hospital, Haslar, Gosport, Surgeon Rear-Admiral (retd.) George Albert Dreaper, C.B., K.H.S.
HIGGINSON.—On June 26th, at a nursing home, after an operation, Charles Gaskell Higginson, M.D., M.A., of Portland-road, Edgbaston, aged 68.

N.B.—A fee of 7s. 6d. is charged for the insertion of Notices of Births, Marriages, and Deaths.

MEMORIAL TO DAME LOUISA ALDRICH-BLAKE.—On July 5th Sir William Beveridge, Vice-Chancellor of the University of London, unveiled a memorial to Dame Louisa Aldrich-Blake in Tavistock-square-gardens. The memorial was designed by Sir Edwin Lutyens. On either side are bronze busts by Mr. Arthur Walker, based on the portrait of Dame Louisa Aldrich-Blake by Sir William Orpen. Dame Mary Scharlieb presided at the ceremony and called in turn upon those who had been closely associated with Dame Louisa Aldrich-Blake to add their tribute. Sir William Beveridge recalled her as a skilled surgeon and administrator with high academic ideals. Lord Riddell, her biographer, who as President of the Royal Free Hospital was chairman of the Memorial Committee, said the memorial would perpetuate the memory of a great lady who had conferred great benefits on that district. Miss Elizabeth Bolton, chairman of the medical board of the Elizabeth Garrett Anderson Hospital, said that Dame Louisa Aldrich-Blake had served the hospital for 30 years and had done her chosen work with great distinction. Finally Lady Barrett, Dean of the London School of Medicine for Women, paid a tribute to the work of her predecessor as dean of the school. The Benediction was pronounced by the Rev. F. H. Aldrich-Blake. Besides the monument the memorial includes the endowment of a travelling scholarship open to all medical women graduates in the United Kingdom and replicas for the Royal Free and the Elizabeth Garrett Anderson Hospitals of the portrait by Sir William Orpen, which is the property of the London (R.F.H.) School of Medicine for Women.

Notes, Comments, and Abstracts.

THE LONDON HOSPITAL.

DISTRIBUTION OF PRIZES BY LORD EUSTACE PERCY.

THE prize distribution took place in the Library of the Medical College on June 29th, Lieut.-Colonel W. Marlborough Pryor, Chairman of the College Board, presiding.

Dr. W. Wright, the Dean of the Medical College, enumerated some of the distinctions gained by past and present students during the year, recorded changes in the personnel of the honorary staff, and chronicled the death of Dr. Francis Warner, Mr. Warren Tay, and Mr. T. A. M. Ross. He spoke of the benefactions given to the hospital and college by the late Lord Bearsted and by Mr. Bernhard Baron, who had this year presented a further £25,000 towards the endowment of the pathological institute, which would in future be known as the Bernhard Baron Pathological Institute. The new residents' hostel on the north side of the out-patient department was now completed. This hostel was for the accommodation of the junior staff of the hospital, and in no way met, but rather emphasised, the need of an adequate students' hostel.

Lord Eustace Percy, M.P., who distributed the prizes, spoke of his responsibilities in connexion with the large medical staff employed by the Board of Education over which he presided. He was responsible to Parliament, if to nobody else, for the work of some 1100 medical officers, not to mention 1300 specialist officers, and between 4000 and 5000 nurses in the schools. He was the more alarmed for his responsibilities when he considered how rapidly this school medical service was growing in certain directions. In the last two years there had been an increase of nearly 20 per cent. in the school clinics in operation in England and Wales—some 1400 now existed. There had been in the same period an increase of over 20 per cent. in the number of hospitals with whom local authorities had arrangements relating to the treatment and care of school-children. The number of local authorities having schemes of orthopædic ascertainment and treatment in their areas had increased by something like 240 per cent. in a period of two years. He might well feel that he represented one branch of those public activities which would depend mainly, in fact wholly, upon doctors for their support in the future. He thought perhaps that this care of children represented the most important part of our public work, for the years of life between 5 and 14, and sometimes below 5, were perhaps years in which most could be done in the way of preventing disease and disability and of insuring health throughout after-life. This task of improving the general health of children of those ages, remedying curable defects, was perhaps the greatest public medical activity being undertaken at the present moment.

Education and Craftsmanship.

He suggested two reflections, connected with the two capacities in which he appeared before them. One was, on the educational side, the reflection of the privileges which they enjoyed as members of a skilled profession with definite qualifications attested by recognised academic authorities; comparatively few people enjoyed privileges of that kind. The medical profession was often ignorantly, and even maliciously, publicly referred as a trade-union; he was not sure that it was a title which the medical profession need repudiate. For the skilled professions originated historically in the same way as the industrial crafts. They originated from the same guild system, and, in the Middle Ages at any rate, the medical profession was no less and no more a guild than any industrial craft. But whereas throughout succeeding centuries since then the skilled professions, and above all the medical profession, had coöperated steadily with the universities and schools of this country, and indeed in a measure imposed their requirements for education on the universities and schools of this country, and had thus become an integral part and a controlling factor in our national system of education, the industrial crafts had not exercised the same influence. In the course of all those developments which were customarily lumped together under the name of the industrial revolution the industrial crafts which used to confer upon their members a status no less distinct and no less eminent than that of the skilled professions, had in a way sunk back, so that even the skilled industrial worker with a good secondary school education did not enter his working life with any such definite qualifications behind him as did the member of the skilled professions, and did not feel that he has the same status in the community that the members of the skilled professions held. And perhaps to that might be attributed a very large part of what was known as social and industrial unrest. Now medical men were in some

sort the mediators between the richer and the poorer classes of this country. They had in that respect a great function to perform; the example set by the system of medical education might be of the very greatest service in the future in building up a desire and a demand for more or less similar ideals of education in industry. The medical profession has been able to mould and to a certain extent control university and school education in the past, because it had not fallen into that fatal error of drawing a hard-and-fast line between a liberal and a vocational education.

The present distinction between vocational and general education and technical education would tend to disappear as industries and occupations developed educational requirements for themselves. Lord Eustace Percy suggested for their consideration the standard and type of education required by those who worked in what used to be called crafts and were now called for the most part the industries of the country. In short, he put it to them that those citizens who were discontented were discontended mainly because they felt that they lacked any definite status in the community; they had been prepared by their education with no definite qualification, and their membership of trade and industrial systems depended upon no educational qualifications.

A Discriminating Judgment.

The second reflection he wished to suggest was that professional skill was useless unless it was guided by that incommunicable gift of judgment which could never be taught, but which it was the main aim of education to enable men gradually and insensibly to acquire. He wondered how much of a doctor's actual working time was spent in scientific diagnosis and how much was occupied in mere human advice, not only to his patient, but to half the members of his patient's family. Our medical education, as all types and classes of education in this country, would in the long run be judged perhaps more than anything else by its power to communicate, to encourage, that exercise of human judgment on which we as a nation have prided ourselves in the past more than upon any other quality. As an example from the School Medical Service he took the mental defective problem among school-children in this country. At what point was it desirable to segregate a child who was not mentally up to the mark and was something more than merely case of backward development? At what point was it desirable to segregate such a child in a special school? To what extent was it desirable to put that child cheek by jowl in that special school with varying types and grades of mental defect? At what age did association with lower grade defectives become harmful to the higher grade defective child? All these problems are problems which required for their solution, indeed a certain amount, a great deal, of high skill and deep scientific knowledge, but which at the same time required more than anything else perhaps the saving gift of common sense and the exercise of a discriminating judgment, and, above all, a sympathetic knowledge of human nature.

Lord Knutsford proposed, and Dr. Robert Hutchison seconded, a vote of thanks to Lord Eustace Percy.

Dr. Hutchison expressed regret that no prizes had been distributed to the teachers. He suggested for future occasions that there might be a prize for the teacher who had given the least boring course of lectures, for the man who had attended his wards with the least degree of unpunctuality, and possibly for the assistant surgeon, who had made fewest bad jokes in the out-patient department. These were all negative virtues, the teacher's positive virtues being beyond any hope of possible reward. If physicians were fortunate enough to win a prize the most appropriate form would be a cheque; for surgeons he thought possibly a book. He concluded a witty speech on a more serious note. There could be no more important work, he said, than to train the rising generation of doctors. The teachers at the London Hospital were vain enough to think that they engage in that work with a considerable degree of success, and that the men turned out—not merely the distinguished students, but the ordinary ones—when they left the College were as fitted for the responsibilities of the profession as the products of any medical school anywhere. They had to face certain difficulties, geographical, financial, and others, which were not felt in the same degree by all other schools, and it was therefore a great encouragement to them to feel that they had the sympathy of the head of the educational department of the country.

NEW CLINICAL THEATRE.

The Bearsted Memorial Clinical Theatre at the London Hospital was opened by Lord Bearsted on June 29th. Lord Knutsford, chairman of the hospital, presided, and recalled the many benefactions given to the hospital by the late Lord Bearsted. To him they owed the whole of the building of the new clinical theatre and a lectureship in connexion with it. Lord Bearsted had only attached one condition to his gift: that it should be open to all classes, all religions, all sects, without distinction. That had always been the tradition of the hospital.

Dr. Robert Hutchison said that the hospital had badly needed a clinical theatre. The one formerly in use was ill-adapted to its purpose, for it was noisy and the teachers had to compete with the noises of the road, often to disadvantage; when that theatre was done away with for a time none at all was available. A modern teaching hospital without a clinical theatre was an anomaly, for clinical teaching was the backbone of all medical instruction. At the London Hospital they had had in the past many distinguished clinical teachers. Men like Jonathan Hutchinson, Hughlings Jackson, Andrew Clark, Frederick Treves, and other great teachers did their work for the most part actually by the bedside, but with the development of modern medicine and teaching it had become a necessity to be able to demonstrate cases, particularly of a rarer type, to a large number of students simultaneously and to illustrate lectures by means of the lantern and epidiascope and other mechanical aids; for this more advanced type of clinical teaching a clinical theatre was a necessity.

Lord Bearsted spoke of his father's desire to show his interest in the hospital in a practical way during his own lifetime. He had felt the cure of disease must depend on knowledge; that the real reason and origin of disease must be found, rather than the palliative or curative effects when the disease has taken hold; and it was for that purpose that this theatre has been erected. In the medical profession there was no such thing as copyright. The medical profession placed its knowledge at the service of all, and that this knowledge should be increased in every way was the desire and the aim of everyone. He hoped that this theatre might prove some small addition to the manifold facilities for gaining knowledge which the hospital afforded.

CHEMISTRY IN THE PROGRESS OF MEDICINE.

IN his presidential address before the Society of Chemical Industry at Edinburgh on July 5th Mr. Francis H. Carr, C.B.E., took as his subject the place of chemistry in the progress of medicine. Pure and applied chemistry are, he said, equally necessary for advancement; progress may best be secured by coöperation in research between academic laboratories, research institutions, and industrial establishments. The chief underlying principle of medical treatment to-day consists in helping the body to produce its own curative agents. Most of the drugs employed in medicine do not cure directly, but by placing the body in a favourable position for exerting fully its own defensive mechanism. On the other hand, a few of the older drugs, such as cinchona and ipecacuanha, do act as direct curative agents. To the mode of action of such natural drugs and the synthetic chemotherapeutic substances which now find a place in medical treatment the lecturer directed particular attention.

Our knowledge of the physiology and biochemistry of living processes is, he said, not yet extensive enough for us to produce a reasoned plan on which to search for chemotherapeutic agents. The chemistry of insulin, of the principles of the pituitary and parathyroid glands, and of the ovarian hormone is still unknown, and although we know the chemical constitution of adrenalin, thyroxine, and histamine and can prepare these compounds synthetically, yet we are not certain as to the methods of their release from the glands which contain them, nor even whether they can exert their action without first being built within the body into more complex molecules. Of the real chemical nature of the bacterial antibodies we know nothing. In many diseases, especially those due to protozoal or amœboid parasites, antibodies do not appear to be formed. Hence chemotherapeutic agents are more than ever necessary, but we can obtain no clue to the type of compound required from our present knowledge of the antibodies and antitoxins.

After referring to the work of Ehrlich, Dale, Voegtlin, Fourneau, Kolle, and others, Mr. Carr concluded: It may not be altogether an accident that more effective therapeutic agencies have been discovered for protozoal diseases than for bacterial; the experimental work has been easier to carry out on animals and less reliance has been placed on purely in vitro experiments. The fact that a suitable animal test may lead to the discovery of a useful therapeutic substance is shown by the recent appearance of plasmochin, a quinoline derivative allied to quinine and most effective in the destruction of the crescent forms of the malarial parasite. The test animal used in this particular instance is the canary, infected with the parasite of avian malaria.

Future advance in chemotherapy lies in the direction of biochemistry and more effective contact between workers in chemistry, bacteriology, physiology, and clinical medicine. Less reliance must be placed on purely in vitro experiments and much more on adequate animal tests followed by extensive clinical trials.

MOTOR ACCIDENTS AND HOSPITALS.

IT is not surprising that the attention of the members of the British Hospitals Association, who met in conference recently at Norwich, should have been engaged the whole of the first afternoon in discussing the present unsatisfactory position of the voluntary hospital with regard to services rendered to the victims of motor accidents. The matter as regarded actuarily was ably and at times humorously dealt with by one of the vice-presidents of the Council of the Insurance Institute of London. He accounted for the vast number of accidents, which occur daily on the roads and streets, by the growth of motor traffic which has been so rapid that pedestrians have not accustomed themselves to the changed method of transport. The National Safety First Association is doing much to educate the public, and Mr. Jenkins pointed out that the very fact of the Association undertaking such work was a proof that it was recognised the motorist was not alone to blame for the many lamentable disasters which occur. Sir Arthur Stanley, at the dinner given in the evening to the delegates, asserted, as a good sportsman, that "if you have to be run over at all it is more pleasant to be run over by a motor-car than by an old four-wheeler, because in such a matter it is all to the motorist's credit that he can do the thing quickly!" Be this as it may —and after all it is a matter of opinion—in most hospitals, situated in or near a busy thoroughfare or an arterial road, 75 per cent. of the beds in the accident or surgical wards are frequently occupied by the victims of a motor smash. This state of affairs reacts badly on the voluntary hospitals in two directions; the waiting-lists of the institution, already in many cases terribly lengthy, are increased, and the hospital exchequer is ruthlessly depleted. As matters stand at present there is nothing but a feeling of gratitude or moral rectitude to ensure that a man or woman even attempts to pay for his keep and treatment in hospital, not to mention the skill of surgeons and nurses. From reports received these qualities seem often strangely deficient in the motorist and his victims, and no legal claim can be made by a voluntary hospital. The insurance expert is of opinion that a right given to a hospital to attach any portion of the insurance money would result in enhanced hospital charges as well as increased insurance premiums. The remedies at present put forward appear to be four. First, to quicken the moral sense of the casualty patient, so that he may pay more willingly—surely rather a forlorn hope. Secondly, that a special 10*s.* should be added to the motorist's insurance premium to enable him to settle the hospital claim. Thirdly, to enable the patient to pay off his indebtedness after recovery by a system of instalment contributions till the whole is discharged. (As it has been pointed out the motorist frequently buys his car on the instalment system, why not pay for his injuries in the same way?) Lastly, a suggestion was made in the *Times* by Dr. Henry J. Wells, in the issue of June 22nd, to the effect that motorists should subscribe to a fund designed to meet the heavy expenses to which hospitals are put by motoring accidents, and that the trustees of King Edward's Hospital Fund (or some such body) should agree to allocate, on a basis of the number of motoring accidents attended to, the sum placed at their disposal. We understand that the hon. secretaries of the Fund are considering this suggestion.

MUSTINESS IN EGGS.

THE "musty" egg has long figured as one of the minor trials of domestic life. In the past it has been regarded as falling in the same category as wet weather, thunderbolts, cats in the garden and other acts of God, and of the King's enemies as something inevitable, uncontrolled and foreordained. The light of science has now, however, been turned upon the musty egg and the cause of its fall from grace is apparent. Mr. A. W. Turner,[1] working in the Veterinary Research Institute of the University of Melbourne, has shown that the peculiarities of the musty egg are due to the working of a small Gram-negative bacillus which he aptly and with a fine ear for *le mot juste* proposes to call the *Achromobacter perolens*. This bacillus grows better at room than at body temperature, from which Mr. Turner deduces that musty eggs are not born in sin but acquire mustiness as a result of contact with the world. Experiments in which cultures of the *Achromobacter perolens* were rubbed upon eggs which had been thoroughly scrubbed and those which had received no such treatment demonstrated quite clearly that although the organism was able to pass through the shells of both, it did so with much greater ease in the case of the scrubbed eggs. From this Mr. Turner deduces a protective power imminent in the "bloom" or natural waxy coating of the egg-shell. This is a piece of research which should be of interest to those housewives who religiously scrub all eggs before placing them in water-glass.

[1] Achromobacter Perolens, the Cause of "Mustiness" in Eggs, by A. W. Turner, Australian Jour. of Experim. Biology and Medical Science, vol. iv., Part 1, 1927.

VACCINE TREATMENT OF ACUTE RHEUMATISM.

SOME experiences in the treatment of acute joint rheumatism in children with gonococcus vaccine have recently been described by E. Faerber and R. Kaplan.[1] The method of treatment followed was that of Brunthaler, who was the first to introduce treatment with vaccines of this organism, on the ground of its possible relation to the "rheumatic diplococcus." The vaccine employed (arthigon) contained 100,000,000 organisms per c.cm. in 40 per cent. urotropin solution. It was given intramuscularly at intervals of 2 to 3 days, the dose being 0·5 c.cm., increasing to 2·5 c.cm., and 5, 10, or 15 injections being given in all. Febrile reactions were slight and irregular and could not be relied on to indicate the length of treatment required. The result of treatment of 12 cases is reported, all the patients having suffered from rheumatism of joints at the time of admission. The series is short as articular rheumatism is not common and other cases were excluded as being insufficiently controlled. The observations covered periods of six months to four years. None of the cases had been treated with salicylates. Seven cases are reported to have remained free from valvular disease. Of five cases reported to have lesions on admission three have apparently recovered. Whilst claiming no certainty in the results Faerber and Kaplan strongly recommend further trial.

A SUPPLEMENT TO THE SANITARY TOWEL.

To the Editor of THE LANCET.

SIR,—An appliance has recently been brought to my notice which, I am convinced, fulfils a long-felt want. I have asked several of my patients to try it, and they all speak of it in terms of the highest praise. Briefly, it affords a complete protection for the inner aspect of a woman's thighs when wearing a vulval pad. It consists of two thin pieces of celluloid which fasten snugly round each thigh by means of an adjustable elastic garter, the adjustment ensuring an instant fit for either a stout or thin patient. A second elastic strap running up the outer side of the leg at right angles to the former is secured to the corset, keeping the whole thing securely in place. On either side of the celluloid is a soft, thin, absorbent gauze pad, the outer one to prevent the celluloid from touching the skin of the thigh, the inner, being in contact with the pad or towel, absorbs any blood or discharge. Each of these gauze pads can be detached instantly and thrown away when soiled, its place being taken by a new "refill." The celluloid can, if necessary, be cleaned with soap and water. Their combined weight, with straps and all, is under 3 ounces, and owing to their flexibility they conform to any movement, and when in position, I am assured, their presence cannot be felt. The chafing and irritation caused to many women by the prolonged use of a sanitary towel is very great, but this appliance not only prevents any discharge from reaching the skin but also prevents the towel itself from coming in contact with the skin. I believe a number of the larger chemists are now stocking this article, but it can readily be obtained from the firm who is introducing it: the Queenetty Co., 134, Cheapside, E.C.

I am, Sir, yours faithfully,

Harley-street, W. G. MURRAY HEIRON.

*** The appliance to which Dr. Heiron refers was submitted to us for inspection. It appears to fulfil the claims made for it by the manufacturers, and may well prove useful to women who suffer from profuse menstrual or other vaginal discharge.—ED. L.

CURRENT OFFICIAL STATISTICS.

WE have received from H.M. Stationery Office Vol. V. of the Guide to Current Official Statistics, covering the year 1926 and part of 1927 in certain selected publications. The object of the guide is to direct the inquirer to all current official publications that contain statistics bearing on the subject in which he is interested, and more especially to inform him of the nature of the statistics he will find in the volumes to which he is referred. We have already commented on this useful book for anyone who desires, for instance, to look up such subjects as hospitals, infantile mortality, midwifery, nursing, or vaccination, in so far as they come under the purview of the various Government departments. The last part of the index is occupied with a list of the titles and cost of the publications issued by the departments, including the Ministry of Health and the Medical Research Council. The Guide grows in value from year to year and has already become an indispensable companion to the reference library. The price is 1*s.* net, or 1*s.* 4*d.* post free.

[1] Jahrbuch für Kinderheilkunde, May, 1927.

ALEXANDRA DAY COLLECTION.—The Lord Mayor of London has announced that the London collections on Alexandra Day amounted approximately to £50,000.